Fiscal Research Program

CHANGES IN THE GEOGRAPHIC DISTRIBUTION OF COUNTY – LEVEL SALES TAX BASES IN GEORGIA

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Executive Summary

The retail sales tax has become an important source of revenue for local governments in Georgia. However, there has been no analysis of how this component of fiscal capacity differs across counties or how the geographic distribution of the retail sales tax base has changed over time. This report contains an analysis of the geographic distribution of the retail sales base and of how it has changed over time, i.e., between 1967 and 1999.

The principal findings of the analysis of the changes in the absolute size of the sales tax base are:

- ?? Counties that started with a small sales tax base in 1967 experienced less absolute growth and grew at much slower rates. Counties that had a large sales tax base in 1967 had larger increases in their sales tax base than counties with initially small sales tax bases.
- ?? For counties within metropolitan areas (MSAs), both the size of the sales tax base and the growth in sales tax base has been substantially larger than in counties not associated with MSAs. The largest growth rates were in counties that in 1967 surrounded Georgia's core MSA counties. Counties in the Atlanta MSA stand out because of the large absolute growth that occurred in Fulton, DeKalb, Cobb, and Gwinnett and the fast growth that occurred in all of the surrounding Atlanta MSA counties.
- ?? The geographic distribution of the sales tax base has favored the northern half of the state. Counties above the Fall Line were much more likely to have experienced greater and faster growth than counties below the Fall Line; counties with little growth or slow growth were more likely to be located below the Fall Line.
- ?? This gap in growth between urban and non-urban counties and between the northern and southern half of the state has led to an increased concentration of the aggregate sales tax base within more populous counties across the state and within the northern half of the state relative to the southern half of the state.

The analysis of per capita sales tax base led to the following findings:

- ?? There has been a substantial increase in the county average sales tax base per capita (adjusting for inflation).
- ?? There have been substantial differences in the growth across counties in per capita sales tax base.
- ?? In 1967, counties in the top 25 percent of counties in terms of per capita sales tax base were relatively disbursed across the state. By 1999, the top 25 percent were concentrated in the northern part of the state.
- ?? Many of the counties with the smallest increase in per capita sales tax base are

located adjacent to counties with a major city and to counties in urban areas. For example, all of the counties surrounding Tift had small growth in per capita sales tax base.

?? The Atlanta and Athens MSAs and several other counties in the northeastern areas of Georgia have become the state's predominant locations of retail trade. This growth in per capita sales tax base in the counties surrounding Atlanta and Athens has come despite the large increase in population that has occurred in these same counties.

?? The sales tax base, both total and per capita, is unevenly distributed across counties. Furthermore, over the time period studied, i.e., 1967-1999, it has become even more unevenly distributed.

The outcome of these changes is that fiscal capacity in Georgia, as measured by sales tax base and per capita sales tax base, is becoming urbanized faster than population. As a consequence, we have seen a relative increase in the state's urban fiscal capacity over rural fiscal capacity. And, more specifically, we have seen an increase in the fiscal capacity in Georgia's northern urban and urbanizing counties relative to much of the rest of the state.

This has important consequences for local governmental fiscal conditions within the state. The likely effect of the differential fiscal capacity on counties in the southern half of the state is a relatively lower ability to provide government services that are funded through the sales tax. This is also true for some rural counties in the northern half of the state. The differences in fiscal capacity may potentially lead to further differentials in the levels or quality of public services. Furthermore, the high concentration of relatively low-fiscal capacity counties in the southern area of the state creates the potential of a large contiguous region within Georgia which provides low levels of government services.

Georgia Counties

I. Introduction

Although the property tax remains the single largest source of local revenue in Georgia, most local governments also use sales taxes to finance local public expenditures. The sales tax base has become an important component of the fiscal capacity of local governments. Thus, in 2000, 30.7 percent of local tax revenues in Georgia came from the sales tax. Given the increasing importance of the sales tax by local governments and the large source of revenue it represents, it is important to have a better understanding of local sales taxes. This report explores one issue, i.e., how the geographic distribution of the retail sales tax base among Georgia's counties has changed over time.[1] By considering the relative size and growth in sales tax bases across counties in Georgia, we provide evidence regarding how this component of fiscal capacity differs across the state and how it has changed over time.

Growth in the sales tax base in Georgia has been positive and strong since the late 1960's. As a result, over the period 1967 to 1999, the sales tax base for the state increased by $76.8 billion in real (i.e., adjusted for inflation) terms, or by 195 percent.[2] Georgia's strong sales tax base growth is the result of favorable overall economic conditions and population growth. However, all counties within the state have not shared equally in the growth of the sales tax base. The result is increased disparity in the fiscal capacity across counties.

This report has three primary parts. In Section II, we describe the changes in the distribution of the sales tax base across counties between 1967 and 1999, specifically considering whether the sales tax base has become more or less geographically concentrated. In Section III we consider changes in sales tax base per capita and sales tax base as a percentage of income, and explore various geographic and economic factors (income level, proximity to a large population, and proximity to other retailers) which may have influenced the changes in the geographic distribution of the per capita sales tax base. In Section IV we discuss factors associated with the location decision of retailers. In Section V we present conclusions and discuss the fiscal implications of the observed county-level changes in the distribution of sales

[1]Note that the sales tax base is comprised of more than just retail sales. It also includes purchases by businesses, which are estimated to be about 36 percent of the sales tax base (Ring, 1999).
[2]Deflated by the CPI produced by the Bureau of Labor Statistics.

tax bases. Note that, unless otherwise stated, within this report all dollar amounts refer to inflation-adjusted values using 1999 as the base year. Also note than the sum of the county-level sales tax bases equals the state-level sales tax base.[3]

[3]We consider sales tax base inclusive of food since most local sales taxes apply to food.

II. Sales Tax Base: Distribution and Geography

In this section we examine differential changes in local sales tax bases in order to address the question: Are local sales tax bases more evenly distributed in 1999 than in 1967? We consider both the absolute growth and growth rate of county-level sales tax bases.[4] See Appendix A for a discussion of the data source.

A. Geographic Concentration in 1967

In 1967, the sales tax base for the state of Georgia was $39.4 billion (in 1999 dollars). The average sales tax base per county was $248 million, whereas the median county-level base was $70 million. Of Georgia's 159 counties, 135 counties had a sales tax base lower than the state average. For 1967, the sales tax base ranged from a low of $2.6 million in Echols to a high of $11.4 billion in Fulton (Appendix B).

Figure 1 shows the inflation-adjusted sales tax base among Georgia counties for 1967. It ranks the counties from lowest to highest by their sales tax base.

Figure 2, which displays the distribution of county-level sales tax bases for 1967, shows that 102 counties in Georgia had a sales tax base of less than $100 million (in 1999 dollars). These 102 counties contained only 12.7 percent of the state's total sales tax base. Seven counties had a sales tax base of more than $1 billion and contained 56.7 percent of the aggregate sales tax base. This emphasizes that in 1967, Georgia's sales tax base was highly concentrated in a few counties.

Figures 1 and 2 reflect two main characteristics of 1967 sales tax bases in Georgia:

- A relatively small number of counties contained a very large share of the aggregate sales tax base.
- There was a wide dispersion in sales tax bases among Georgia counties.

The concentration of the aggregate sales tax base in a few counties and the wide dispersion in the county-level sales tax bases results in substantial differences in the revenue generating capacities between counties.

[4]Growth rate measures the speed of growth, or rate of growth, while growth refers to the dollar increase.

FIGURE 1. REAL SALES TAX BASE FOR GEORGIA COUNTIES BY RANK, 1967 (IN MILLIONS)

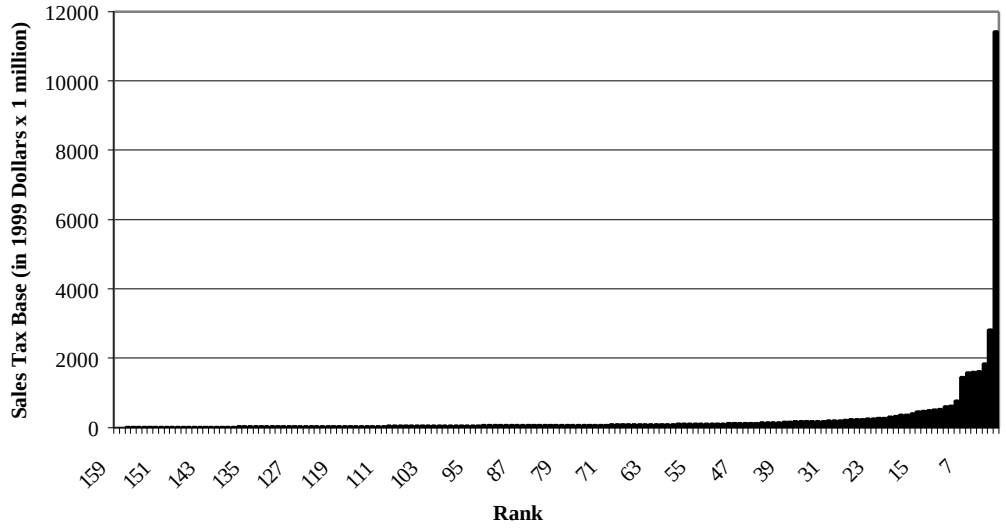
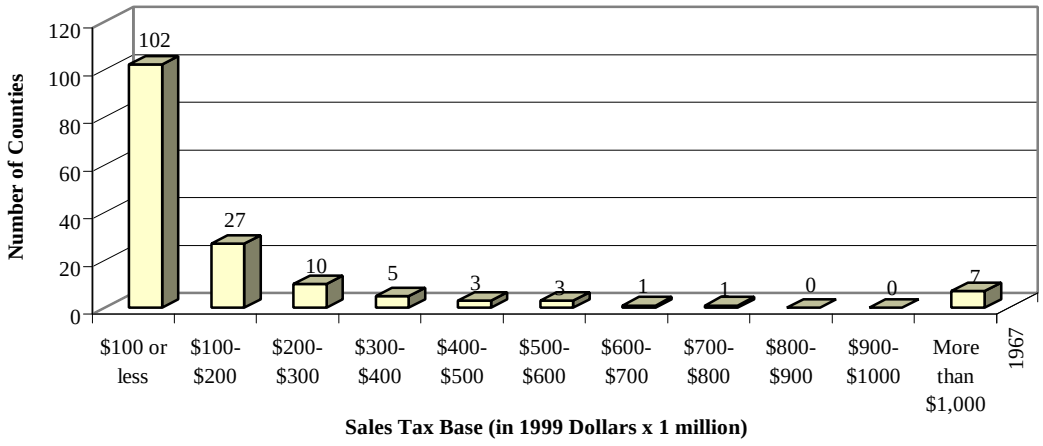


FIGURE 2. DISTRIBUTION OF COUNTY-LEVEL SALES TAX BASE, 1967



In 1967, the Atlanta area had 11 counties in the top quartile (which consists of 39 counties), although counties within the top quartile are not confined to any single region of the state (Map 1). This indicates that though a large share of the sales tax base was held by a relatively small number of counties, these counties were not particularly geographically concentrated in 1967.

For the purpose of this report we define a retail-center county as one that has a retail sales tax base that is 50 percent larger than the average for the state, which for 1967, is any county that had a sales tax base greater than $372 million. There were 16 counties that qualified as retail centers in 1967, and are labeled with their names in Map 1. Retail centers are concentrated in and around the Atlanta Metropolitan Area. Fulton, DeKalb, Cobb, Clayton, Gwinnett, and Hall counties represent the largest area of concentrated sales tax base in the state. However, retail centers in 1967 were also located throughout most other areas of the state and consist of single counties that contain relatively large cities. Common to most of the 1967 retail centers is highway access, although Floyd and Clarke are notable exceptions. [5]

B. Geographic Concentration in 1999

By 1999, the sales tax base for the state of Georgia was $116.1 billion, a growth in sales tax base of $76.8 billion in real terms over 1967. The average sales tax base per county was $730.4 million, and the median base was $ 191.7 million. 130 counties had a sales tax base lower than the state average. For 1999, the sales tax base ranged from a low of $11.1 million in Taliaferro to a high of $18.9 billion in Fulton (Appendix B).

In 1999, much of Georgia's sales tax base was still concentrated within the top quartile of counties and there was still a wide dispersion in sales tax bases (Figure 3). The difference in sales tax base between the highest ranking county and lowest ranking county grew substantially over the period, from $11.4 billion in 1967 to $18.9 billion in 1999, or by 66.1 percent.

[5] It should be noted that some of the highways appearing on the maps were not four-lane highways at the beginning of the period. They are included on the maps as reference points that may provide insight into the effect of highways on development, or vice versa.

MAP1. SALES TAX BASE, 1967

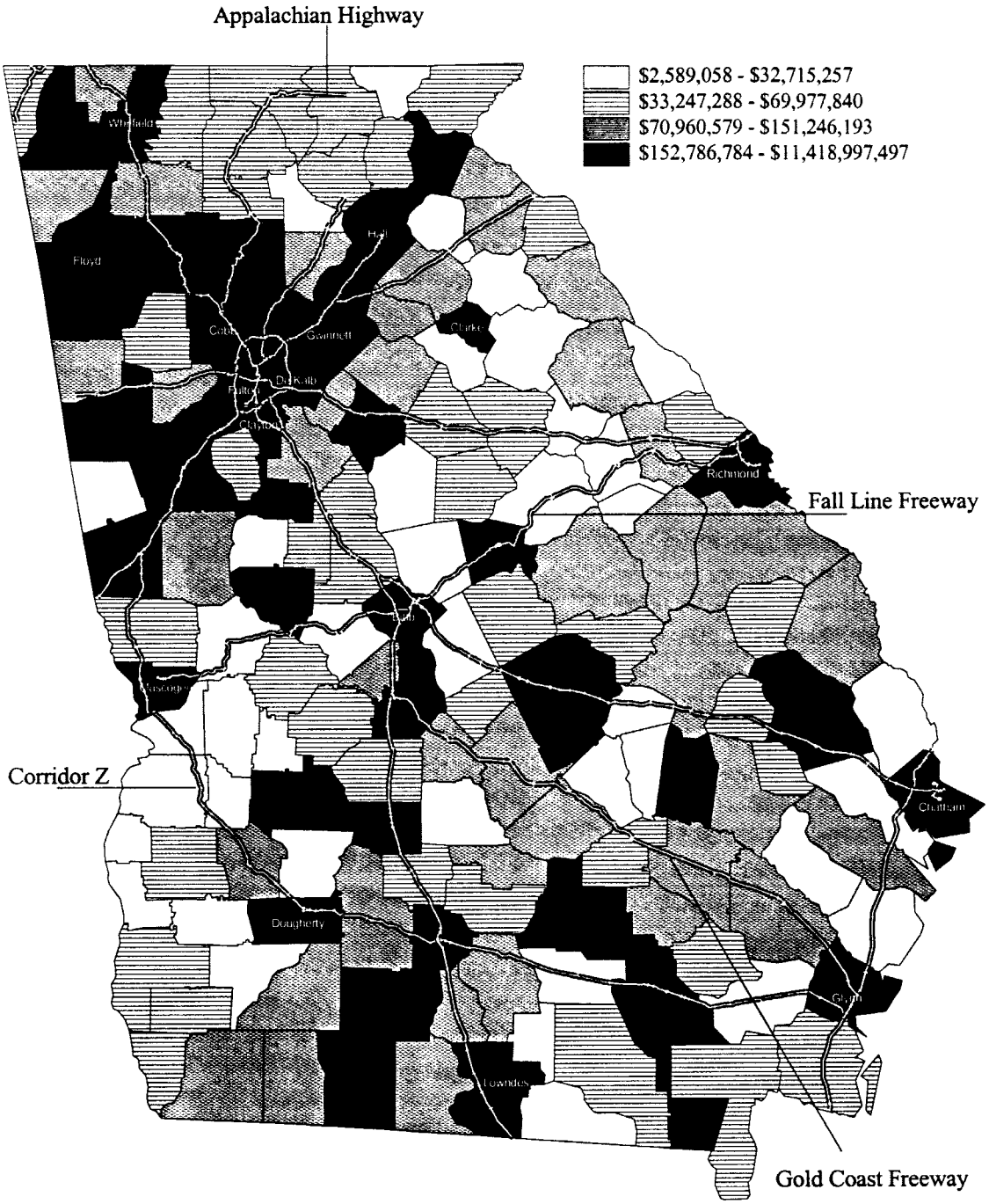
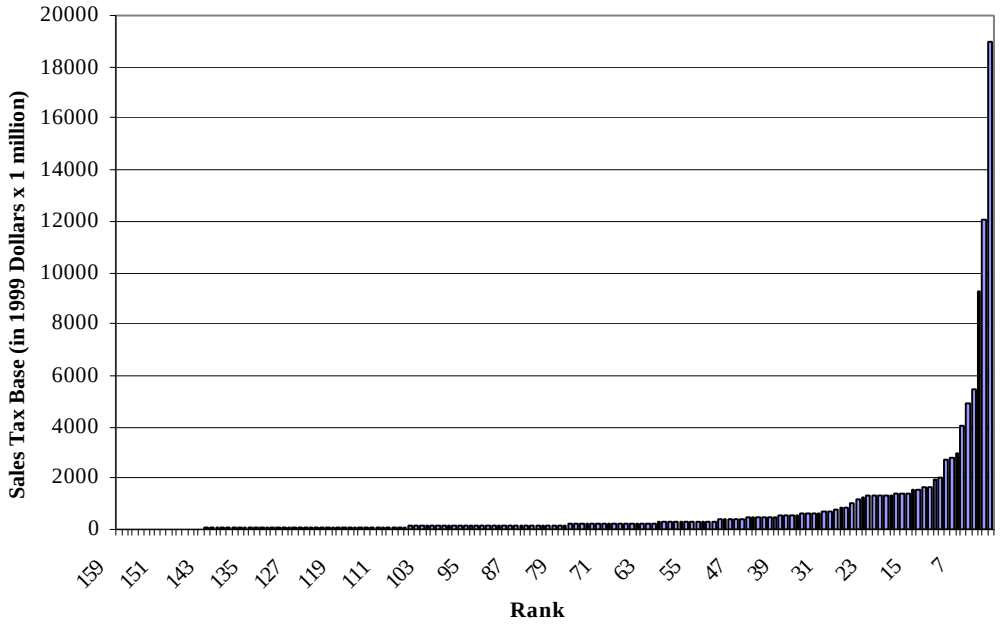


FIGURE 3. REAL SALES TAX BASE FOR GEORGIA COUNTIES BY RANK, 1999 (IN MILLIONS)



In terms of the geographic distribution of sales tax bases for 1999, a dominant feature is the concentration of the sales tax bases for the top quartile of counties around the Atlanta MSA (Map 2). All but one of the 20 Atlanta MSA counties are in the top quartile. In 1999, there were 25 retail centers, i.e., counties with a sales tax base greater than $1.09 billion (50 percent greater than the mean), which are labeled with their names. Of the retail centers identified, 13 are located inside the Atlanta MSA, an additional 4 are located in counties outside the Atlanta MSA in the northern region of the state. In the southern half of the state, 8 retail centers were identified; however, retail center counties in the southern half are more disbursed than in the northern half of the state.

C. Growth of Sales Tax Bases

Figure 4 presents the distributions of sales tax bases for 1967 and 1999. The two distributions reflect the fact that the aggregate sales tax base (in real terms) increased, resulting in a rightward shift in the distribution. The number of counties in the lowest category ($100 million or less) fell by more than half over the 32-year period. In 1967, more counties were located at the lower end of the distribution than

MAP 2. SALES TAX BASE, 1967

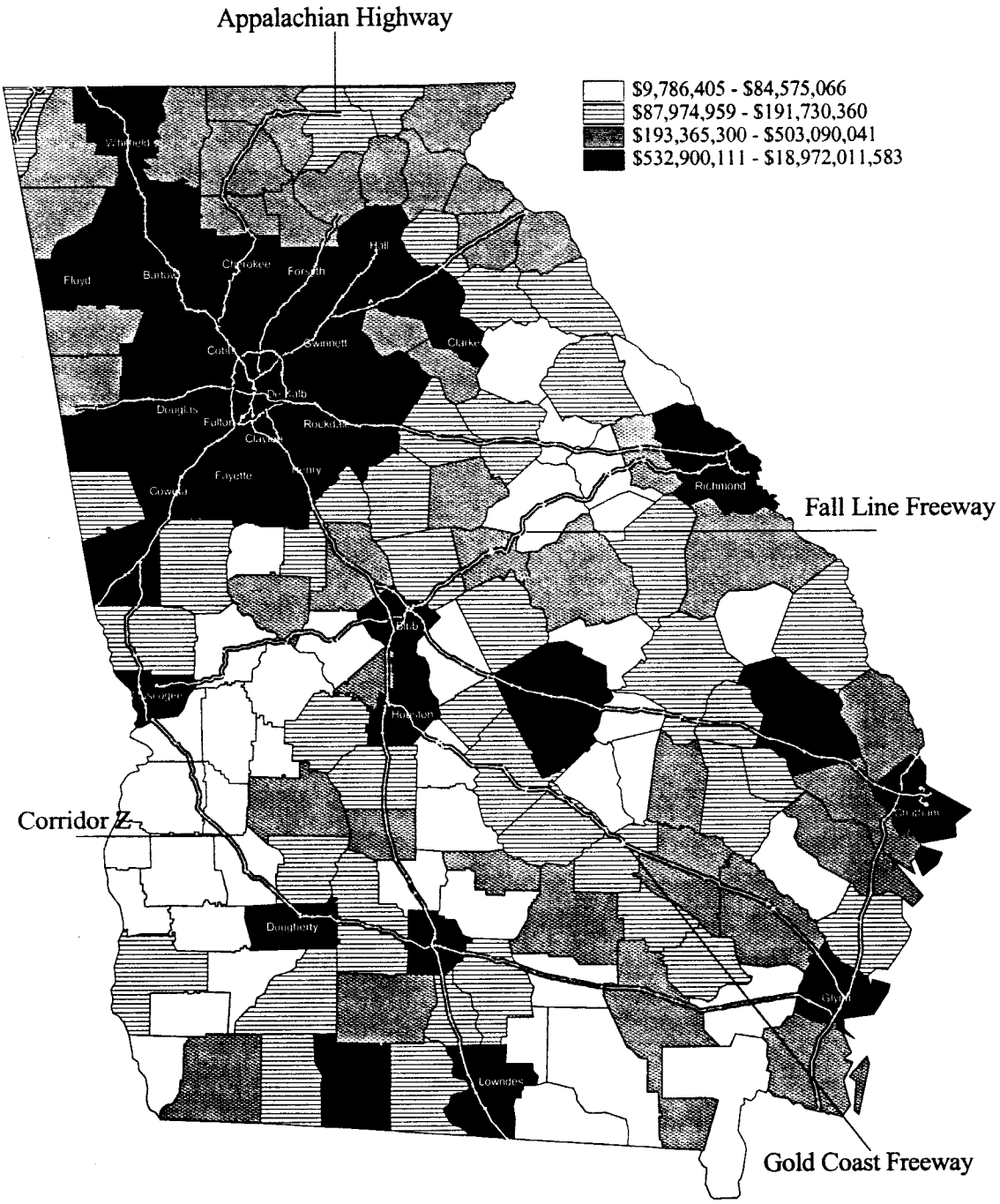
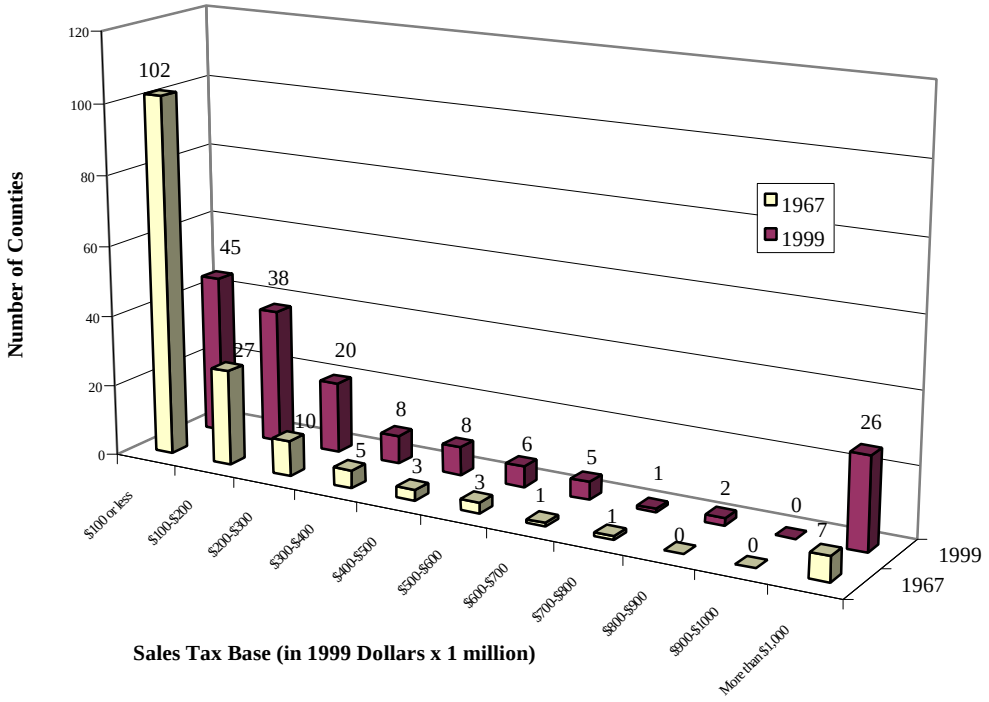


FIGURE 4. DISTRIBUTION OF COUNTY-LEVEL SALES TAX BASE, 1967 AND 1999



in 1999, reflecting the growth in sales tax bases that almost all counties in Georgia experienced over the 32-year period. In real terms, all but two counties (those being Jenkins and Pulaski) in the state experienced an increase in their sales tax base, in real terms. The number of counties in the upper category increased substantially. In 1967, there were 7 counties with a sales tax base larger than $1 billion (in 1999 dollars). By 1999, the number of counties in this category had grown to 26, an increase of more than 370 percent.

Much of the growth in county-level sales tax bases is concentrated within those counties ranked at or near the top in terms of the size of their sales tax base. In absolute terms, a relatively small share of the state's total growth came from counties within the bottom two quartiles (counties ranked 80 or lower).

Counties in the southern half of the state that meet our definition of a retail center remained virtually unchanged since 1967, with Houston County being the only addition (compare Map 2 and Map 1). However, in the northern half of the state the number of retail-center counties increased substantially. In 1967, 9 of the 16 retail center counties (56 percent) were located in the northern half of the state; however,

by 1999 the northern half of the state contained 17 of the 25 retail-center counties (68 percent). In 1967, only 4 counties within the 1990 boundaries of the Atlanta MSA counties were retail centers. But by 1999, this number had increased to 13. Furthermore, these new retail-center counties in the Atlanta MSA comprise more than half of the new counties with a sales tax base over $1 billion.

Figure 5 contains the rankings of Georgia's county-level sales tax base by growth. The growth for the lowest ranked 130 counties is small, and in absolute terms does not differ much across the counties. For the top 28 counties, however, growth increases dramatically as rankings increase. For the six counties with the largest growth, growth explodes. These six, all of which grew by more than $2 billion, are nearly all in the Atlanta MSA. The only exception is Chatham, with a growth of $2.2 billion. Most of the growth in sales tax base occurred in counties from the top quartile (i.e., the top 39 counties in 1967); the growth in these counties since 1967 comprise 73.5 percent of the total growth in aggregate sales tax base.

Most of the counties in the top growth quartile are those with relatively large cities (Map 3). The counties in the Atlanta and Athens area stand out as the focus of the strongest growth in sales tax base in the state; however, counties with relatively strong growth in sales tax base are spread across most areas of the state. The Atlanta, Savannah (Chatham), Athens (Clarke and Jackson), Augusta (Columbia and Richmond), Macon (Bibb and Houston), Albany (Dougherty), and Columbus (Muscogee) MSAs each contain a county (or counties) in the top quartile in sales tax base growth. In addition to MSAs, several non-MSA Georgia counties containing large cities also were in the top quartile; Whitfield (Dalton), Lowndes (Valdosta), Floyd (Rome), Troup (LaGrange) and Glynn (Brunswick/Saint Simon's) each saw a substantial increase in their sales tax base over the period.

With the exception of counties in the Atlanta and Athens MSAs, counties in the top quartile in sales tax base growth are geographically disbursed. Of the 39 counties with the highest growth, 11 are located at or below the Fall Line, and notably, almost all have direct access to a major interstate highway. And, while Athens and Albany are not located on major interstates, Albany lies along Corridor Z, a recent highway expansion and widening project from Columbus to Brunswick, and

MAP 3. GROWTH IN SALES TAX BASES, 1967 TO 1999

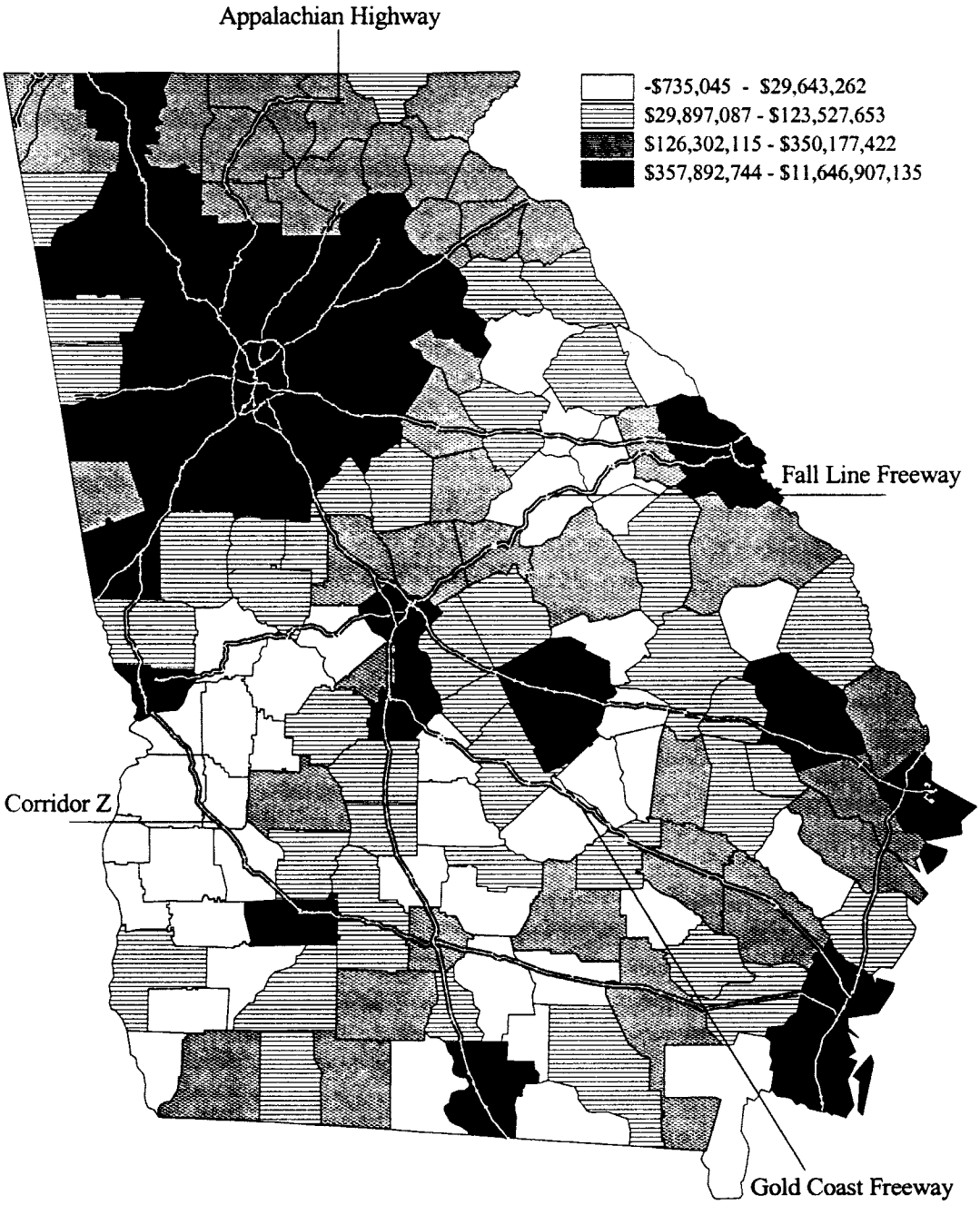
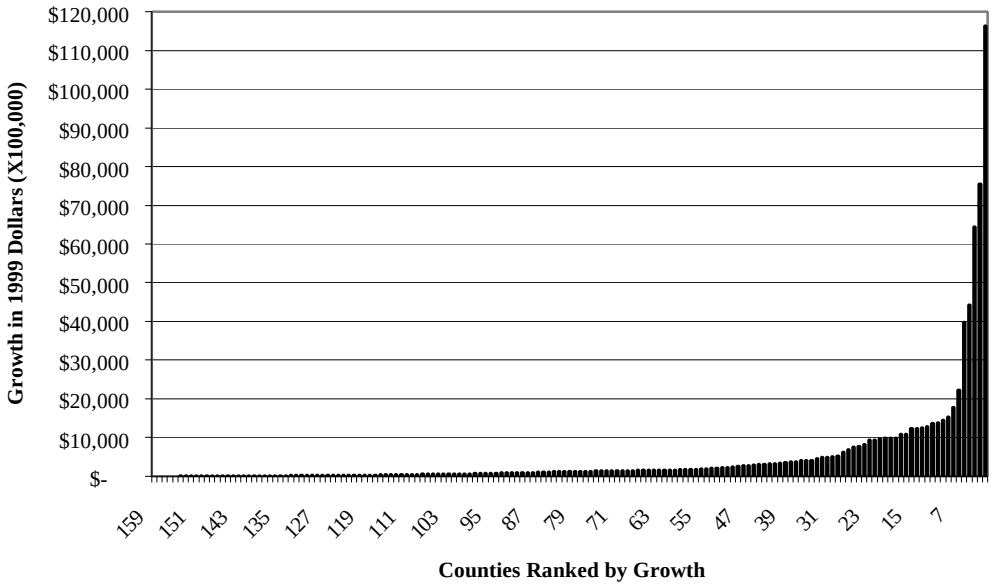


FIGURE 5. GROWTH IN SALES TAX BASE, 1967-1999



Athens lies on highways 316, 29 and 10, all of which afford Athens/Clarke County multi-lane access to I-85 and the Atlanta area.

Counties with the lowest growth in retail are not as evenly distributed geographically as the top performers. In all, 36 of the 40 counties in the lowest growth quartile are located entirely or partially south of the Fall Line Freeway. Furthermore, several of these low-growth counties are contiguous. The highest concentration of low-growth counties is located along the western border of the state, below the Fall Line Freeway. Another pocket of low sales tax base growth occurred in the south-central area of the state between I-75 and the Golden Isle Parkway. Notably, many of the counties in the lowest quartile have relatively good access to a major highway.

The analysis above suggests that the aggregate sales tax base is becoming more concentrated in metropolitan areas of the state. However, to provide a more definitive measure of the change in the concentration of the sales tax base since 1967, we calculate and compare the ratio of the share of total sales tax base for the bottom quartile (i.e., the 40 counties with the lowest total sales tax base) to the top quartile

for both 1967 and 1999. A larger ratio indicates that a larger share of state's total sales tax base is located in the counties in the top quartile relative to the bottom quartile, and consequently, a larger ratio indicates an increased conce ntration of sales tax base. In 1967, the value of this ratio was 42.1, i.e., the top quartile's total sales tax base in 1967 was 42.1 times larger than the bottom quartile's. (In 1967, the average real sales tax bases for bottom and top quartile were $19.3 million and $833.0 million, respectively.) However, by 1999, the value of this ratio had increased to 51.5, indicating that the share of sales tax base in the top quartile has risen by 22.3 percent relative to counties in the bottom quartile. (For 199 9, the average sales tax bases for bottom and top quartile were $46.7 million and $2.47 billion, respectively.)

We also calculate the ratio of the top and bottom 10 counties to examine the relative concentration of sales tax base among the extreme top and bottom counties. In 1967, the value of the ratio of the top to bottom ten was 291.9. By 1999 the ratio had increased to 296.1, indicating that the counties with the top ten sales tax bases increased their share of the total sales tax base relative to the bottom ten counties, but not substantially. The change in both of these comparisons of ratios provide a clear indication that the sales tax base in Georgia has become more geographically concentrated over the past 32 years.

D. Growth Rate of Sales Tax Bases

Whereas county-level growth provides a measure of absolute change in the sales tax base, the growth rate provides an indication of how fast the base is changing. The average annual rate of growth in inflation –adjusted aggregate sales tax base was 3.4 percent per year from 1967 to 1999. The median growth rate of county-level sales tax base over that period was 2.8 percent. The annual growth rate among Georgia counties ranged from a low of -0.03 percent in Pulaski to a high of 11.5 percent in Fayette. Note that given a sustained growth rate of 2.8 percent (the median) a county would require approximately 25 years for its sales tax base to double in size. At a 6 percent growth rate a county would double its sales tax base in only 12 years, and that t ime would be reduced just over 6 years at an 11.5 percent growth rate.

Figure 6 shows the relative differences in growth rates among Georgia counties. It ranks, from lowest to highest, the counties by their annual average growth rates in sales tax base. Moving up the rankings, county growth rates increase steadily; however, the growth rates for counties with growth rates greater than 6 percent (i.e., ranked 17 and higher) make a substantial increase and, then, increase exponentially with subsequently higher rankings.

The distribution of growth rates among Georgia counties (Figure 7) is skewed toward the lower growth rates (i.e., more counties lie below than above the average growth rate). Relatively few counties have experienced an average annual growth rate in sales tax base in excess of 6 percent per year. Those 19 counties that have seen 6 percent or more annual growth comprised 36.5 percent of the total growth since 1967. This indicates that some of Georgia's counties with the fastest growing sales tax bases are also counties that are among those with the largest absolute growth in sales tax base. This is also consistent with the correlation coefficient of 0.15 between growth and growth rate.

Table 1 contains the 39 counties that had highest sales tax base growth rates and the 39 that had the largest absolute growth in sales tax base. We define an emerging retail center as a county that exhibits both a high rate of growth and a relatively high absolute growth. The counties that we classify as emerging retail centers, i.e., those that are common to both columns in Table 1 and are indicated in boldface, are predominantly counties in or adjacent to a metropolitan statistical area (MSA). Of the 16 emerging retail centers identified, 10 (62.5 percent) are located in the Atlanta MSA.[6] Other emerging retail counties in the northern half of Georgia include Catoosa and Gordon Counties, which are located between the Atlanta and Chattanooga MSAs, Hall County, which is located adjacent to both the Athens and Atlanta MSAs, and Coweta County, which is adjacent to the southwestern border of the Atlanta MSA. In all, the northern part of the state contains 14 of the 16 emerging retail centers (87.5 percent). The remaining two emerging retail-center counties are Columbia County (Augusta MSA) and Camden County, which is located along the

[6]Although Fulton, Cobb, and DeKalb are among the top counties in absolute growth, the growth rates in sales tax bases are low, so they would not be classified as an emerging retail center.

FIGURE 6. RANKED GROWTH RATE

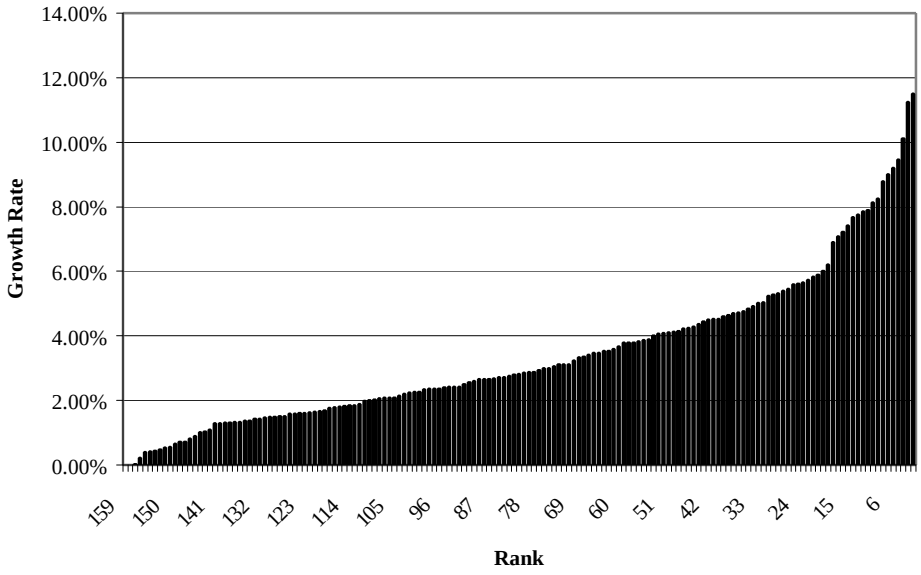


FIGURE 7. DISTRIBUTION OF SALES TAX BASE GROWTH RATES, 1967-1999

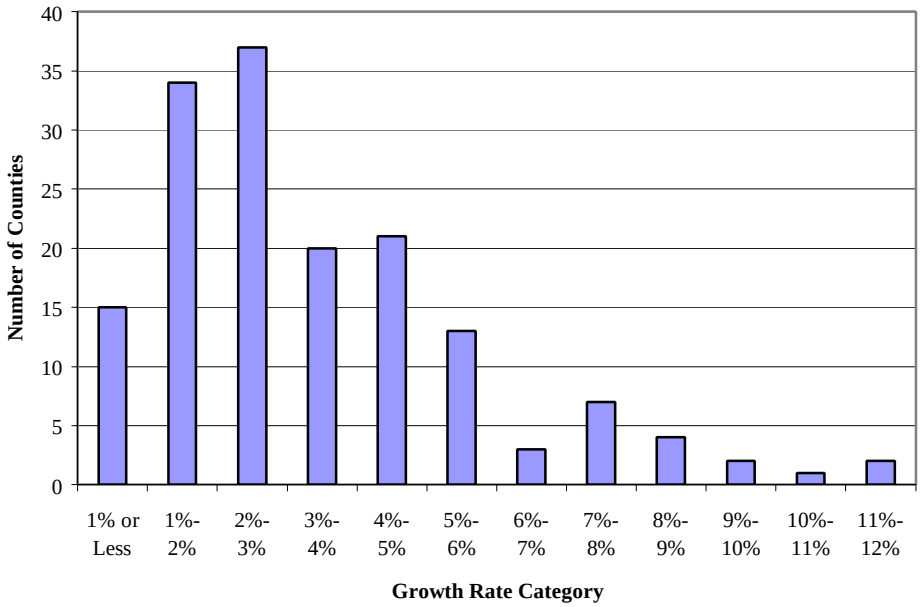


TABLE 1. A COMPARISON OF HIGH GROWTH AND HIGH GROWTH RATE COUNTIES

Top 39 Counties in Annual Average **Growth Rate** in Sales Tax Base (Growth in Millions of Dollars)			Top 39 Counties in Annual Average **Growth** in Sales Tax Base (Growth in Millions of Dollars)		
Counties	Growth Rate	Growth	Counties	Growth Rate	Growth
FAYETTE	11.5%	$ 1,376.0	**GWINNETT**	11.2%	$11,646.9
GWINNETT	11.2%	$11,646.9	FULTON	1.6%	$ 7,553.0
COLUMBIA	10.1%	$ 827.5	DEKALB	3.8%	$ 6,454.2
FORSYTH	9.5%	$ 1,459.1	**CLAYTON**	7.4%	$ 4,425.4
HENRY	9.2%	$ 1,278.7	COBB	4.2%	$ 3,988.6
DAWSON	9.0%	$ 268.6	CHATHAM	2.5%	$ 2,224.7
ROCKDALE	8.8%	$ 1,252.8	**CHEROKEE**	7.9%	$ 1,784.2
HEARD	8.3%	$ 148.7	**HALL**	4.6%	$ 1,526.7
EFFINGHAM	8.1%	$ 312.4	**FORSYTH**	9.5%	$ 1,459.1
PAULDING	7.9%	$ 629.5	RICHMOND	2.0%	$ 1,385.4
CHEROKEE	7.9%	$ 1,784.2	**FAYETTE**	11.5%	$ 1,376.0
DOUGLAS	7.8%	$ 1,232.0	**HENRY**	9.2%	$ 1,278.7
OCONEE	7.7%	$ 234.3	**ROCKDALE**	8.8%	$ 1,252.8
CLAYTON	7.4%	$ 4,425.4	**DOUGLAS**	7.8%	$ 1,232.0
LEE	7.2%	$ 104.7	MUSCOGEE	1.8%	$ 1,229.4
CAMDEN	7.1%	$ 415.1	WHITFIELD	3.5%	$ 1,090.0
BANKS	6.9%	$ 159.1	BIBB	1.6%	$ 1,086.0
MONROE	6.2%	$ 327.7	**COWETA**	5.7%	$ 981.4
BRYAN	6.0%	$ 164.0	CLARKE	3.0%	$ 980.5
GILMER	5.9%	$ 251.5	**BARTOW**	5.2%	$ 980.1
CATOOSA	5.8%	$ 518.1	HOUSTON	4.4%	$ 968.7
PUTNAM	5.7%	$ 219.0	GLYNN	3.6%	$ 934.8
COWETA	5.7%	$ 981.4	LOWNDES	3.3%	$ 931.9
LUMPKIN	5.6%	$ 177.1	**COLUMBIA**	10.1%	$ 827.5
LIBERTY	5.6%	$ 350.2	CARROLL	4.2%	$ 765.5
TWIGGS	5.5%	$ 63.7	DOUGHERTY	2.1%	$ 750.5
TOWNS	5.4%	$ 102.1	FLOYD	2.4%	$ 687.7
JONES	5.3%	$ 136.4	**PAULDING**	7.9%	$ 629.5
WHITE	5.3%	$ 179.8	**CATOOSA**	5.8%	$ 518.1
BARTOW	5.2%	$ 980.1	**GORDON**	5.0%	$ 503.4
GORDON	5.0%	$ 503.4	BULLOCH	3.8%	$ 488.6
UNION	5.0%	$ 142.8	TROUP	2.7%	$ 485.8
MURRAY	4.9%	$ 223.3	NEWTON	4.1%	$ 455.4
ECHOLS	4.8%	$ 9.1	**CAMDEN**	7.1%	$ 415.1
MCINTOSH	4.8%	$ 110.6	JACKSON	4.4%	$ 412.0
MADISON	4.7%	$ 101.8	SPALDING	2.4%	$ 411.2
PIKE	4.7%	$ 50.3	WALTON	4.0%	$ 381.7
QUITMAN	4.6%	$ 13.3	BARROW	4.5%	$ 381.0
HALL	4.6%	$ 1,526.7	LAURENS	2.9%	$ 357.9
Percent of Total Growth In Sales Tax Base, 1967-1999	45.2%			85.0%	

Georgia coast between the Savannah and Jacksonville MSAs. No county in the south-central or southwestern areas of the state were identified as emerging retail centers.

Counties in the highest growth-rate quartile (i.e., the top 25 percent) are located predominantly in the northern half of the state and along Georgia's coast (Map 4). Fulton County lies at the heart of a large region of relatively high growth-rate counties extending along the interstate highways emanating from the City of Atlanta. Counties with fast-growing sales tax bases are especially concentrated around the northern interstates. Smaller pockets of rapid growth are also located adjacent to Bibb County (Macon MSA) and Clarke County (Athens MSA). The coastal areas of Georgia represent another region of rapid growth, however, the growth is not concentrated around a core metropolitan county as in Atlanta. Notably, interstate highway access is common to counties experiencing relatively high growth rates; however, as seen in most of the southern half of the state, interstate access does not necessarily guarantee a high growth rate.

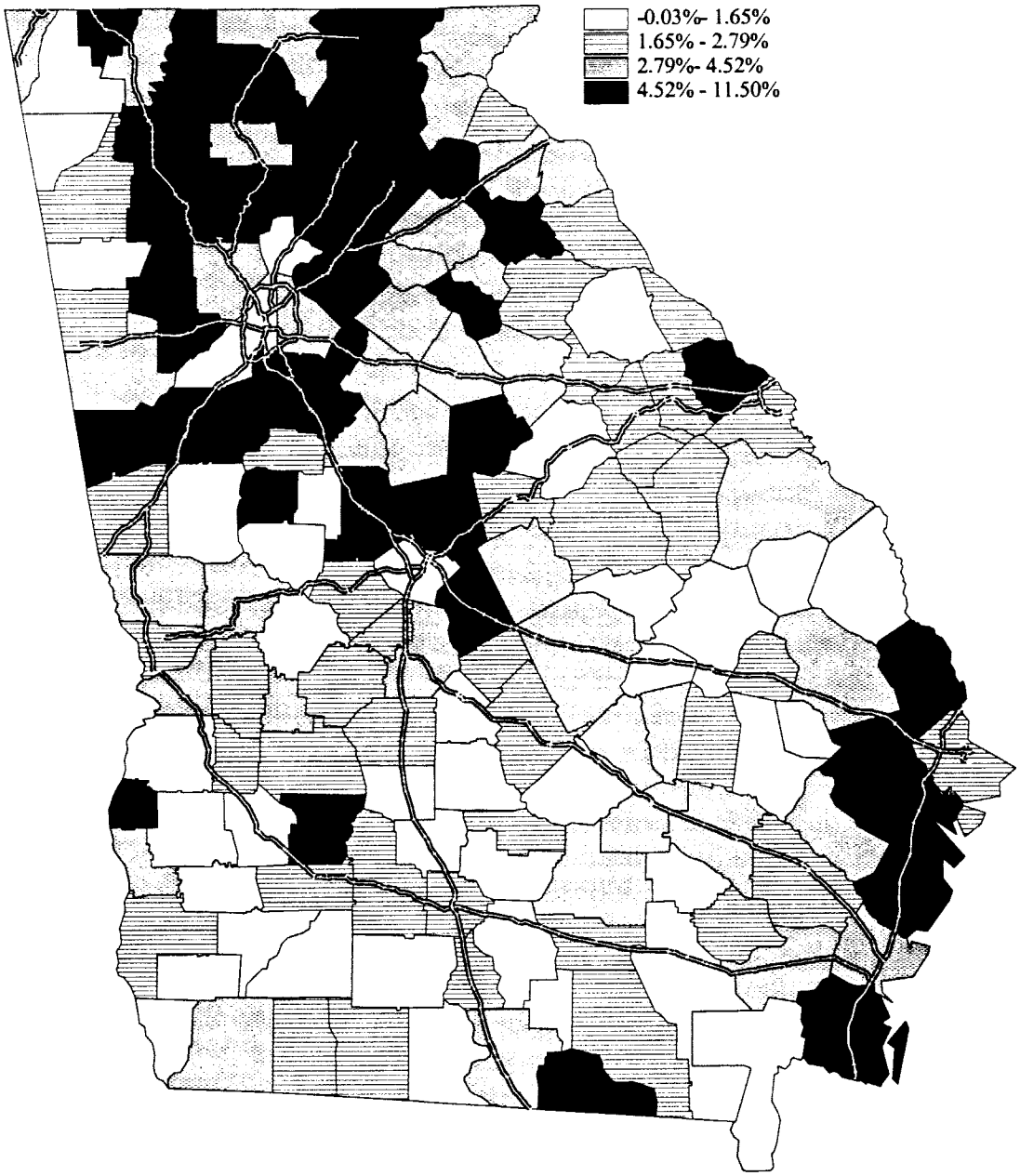
By contrast, counties in the lowest growth-rate quartile are heavily concentrated in the southern part of the state. The northern half of the state has only a few counties in the lowest quartile. Most of the counties with the slowest growth are those located between relatively large cities in the south Georgia region.

Fulton, Muscogee, and Bibb are all core metropolitan counties that are in the lowest growth quartile. These counties, however, were among the top in absolute growth (see Table 1). For these counties, the slower growth rate is likely the result of a larger, more mature retail base.

Most of the rapid-growth counties are located near core MSA counties or near large cities. The most noticeable example is the Atlanta MSA, in which Fulton, Cobb and DeKalb are surrounded by a ring of fast-growing counties that are concentrated in the northern areas of the MSA.

Bibb, Chatham, Clarke, Lowndes, Dougherty and, to a lesser extent, Richmond and Muscogee, all display a pattern similar to that of Fulton and the rest of the Atlanta MSA. The core counties of these non-Atlanta MSAs experienced

MAP 4. GROWTH RATES, 1967 - 1999



relatively slow growth while neighboring counties grew at a much more rapid pace. It appears that as the retail base matures in the larger, more urban core MSA counties, neighboring counties experience more rapid growth in sales tax base.

Although high growth counties are found across most areas of Georgia, the concentration of rapid-growth counties is heavily in the northern half of the state. Only 11 of the 39 counties (28.2 percent) in the top quartile are located south of the Fall Line Freeway. However, slow-growth counties are located in dense clusters in the southern half of the state. Slow-growth counties are especially concentrated along major highways between larger cities in the south-central and southwestern areas of the state.

E. Section Summary

Georgia's largest real growth in sales tax base has centered on metropolitan areas of the state and large cities with relatively good access to highways. Outside the Atlanta MSA, retail has become more geographically concentrated.

For counties within the Atlanta MSA, the fastest retail growth has moved its focus from Fulton County to the surrounding counties. And, though Fulton, Cobb, and DeKalb remain among the top in absolute growth in sales tax revenues, they face slower growth rates because of their already large sales tax base. The result is that many of the counties comprising the Atlanta MSA now make up what might be referred to as a retail region with the largest absolute growth in sales tax base occurring in the core counties of Fulton, DeKalb and Cobb, while the fastest growth in sales tax base is occurring in a ring of counties surrounding the core.

Looking at the state as a whole, counties with the fastest growing sales tax bases are located primarily in the northern half of the state; however, the counties surrounding Macon and coastal counties (around Savannah and Brunswick) represent pockets of rapid growth in the central and southern areas of the state.

Counties with the strongest absolute growth in sales tax base are primarily core MSA counties or counties with large urban cities. And, although the Atlanta MSA counties clearly represent the strongest region of absolute growth in sales tax

base, there are also several non-Atlanta counties around the state that have also exhibited relatively strong absolute growth.

While some slow growth counties are located north of the Fall Line, most of the counties with the slowest growth are scattered mainly across the southern half of the state. Counties with the lowest absolute growth in sales tax base are almost entirely located in dense clusters in the southern half of the st ate. Notably, access to transportation seems to have mixed effects on the locations of fast-growth and high-growth counties.

III. Sales Tax Base Per Capita

Georgia's sales tax base growth may be attributable, in part, to both increases in population and increases in real income. An increase in the population usually leads to an increase in taxable sales through the addition of shoppers. Likewise, an increase in real income increases taxable purchases for each shopper. While total sales tax base in a county can be used to measure fiscal capacity, comparing the size of the tax base with population produces a more meaningful measure of fiscal capacity, since the size of the population reflects the extent to which the tax base is needed to provide services.

The total sales tax base in a county can be used to identify retail centers within a state. However, sales tax base per capita can also be used to identify retail centers, or what we will refer to as retail hubs, since large sales tax bases per capita are partly the result of non-residents shopping in the county.

A. Per Capita Sales Tax Base

The average inflation-adjusted county-level per capita sales tax base for 1967 was $5,756. The median was $5,362. Sales tax base per capita ranged from $1,099 in Chattahoochee to $19,362 in Fulton. Again, 1967 values are adjusted for inflation.

In 1967, the distribution of per capita sales tax base closely resembled the shape of a "normal distribution," with Fulton County being an outlier (Figure 8). Most of the counties were concentrated around the state's average per capita sales tax base.

The average county-level per capita sales tax base for 1999 was $10,579 and the median was $10,090. Sales tax base per capita ranged from $1,865 in Chattahoochee to $25,471 in Fulton (Figure 9).

In 1999, the distribution of sales tax base per capita was less symmetric and covered a wider range of values than in 1967. With most counties experiencing an increasing per capita sales tax base, the number of counties in the lower per capita sales tax base categories declined. At the same time, the number of counties in the upper categories, and in particular, the number of counties in the upper tail of the distribution, increased.

FIGURE 8. DISTRIBUTION OF SALES TAX BASE PER CAPITA, 1967

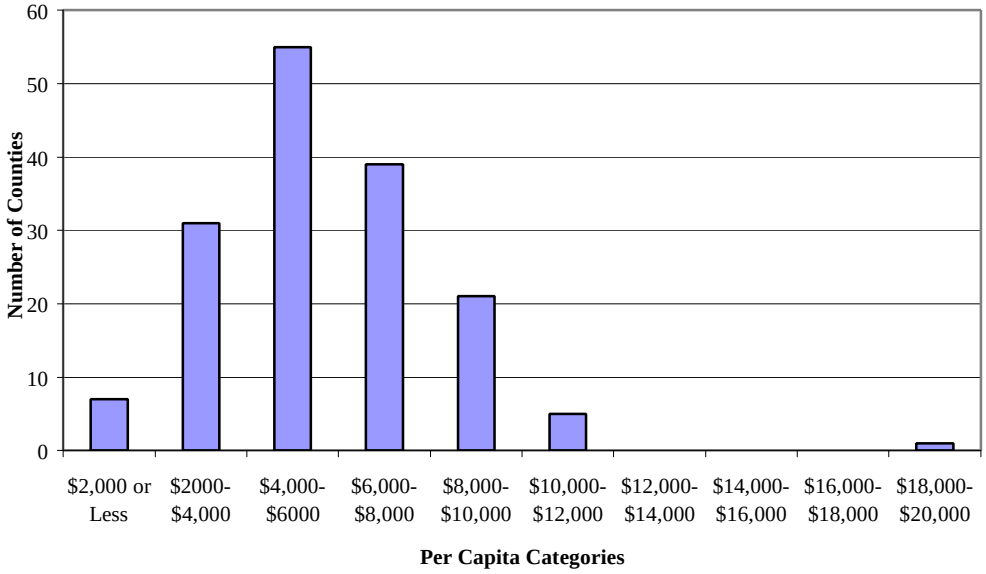
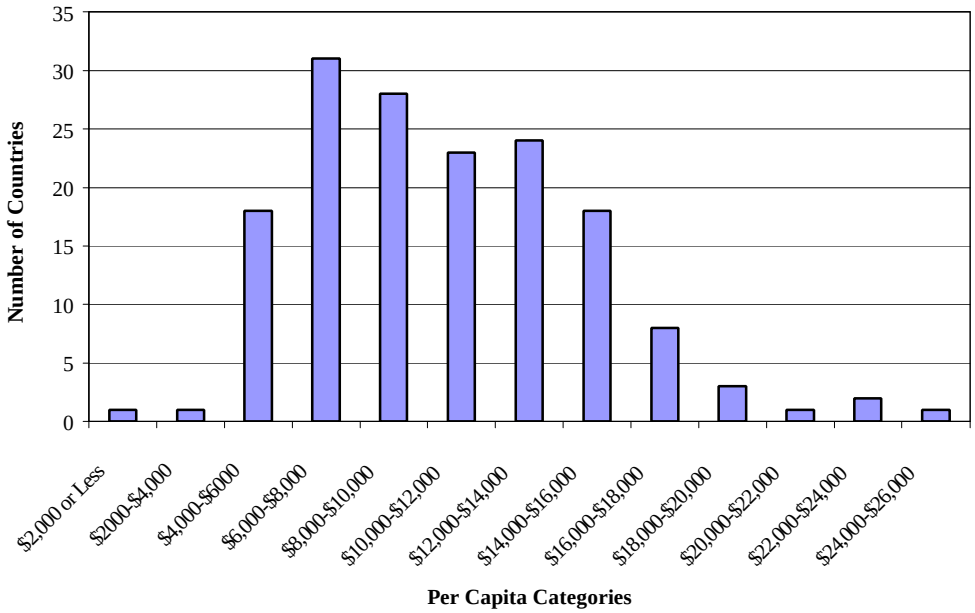


FIGURE 9. DISTRIBUTION OF SALES TAX BASE PER CAPITA, 1999



Maps 5a and 5b depict sales tax base per capita for 1967 and 1999, respectively. In 1967, counties in the top quartile of sales tax base per capita were relatively disbursed across the state. Of the 39 counties in the top quartile, 21 (53.8 percent) were located in the southern half of the state, 12 (30.7 percent) were located in the northern half, and 6 were located along the Fall Line Freeway. Furthermore, counties in the top quartile were not confined to the larger urban counties, particularly across the southern half of the state.

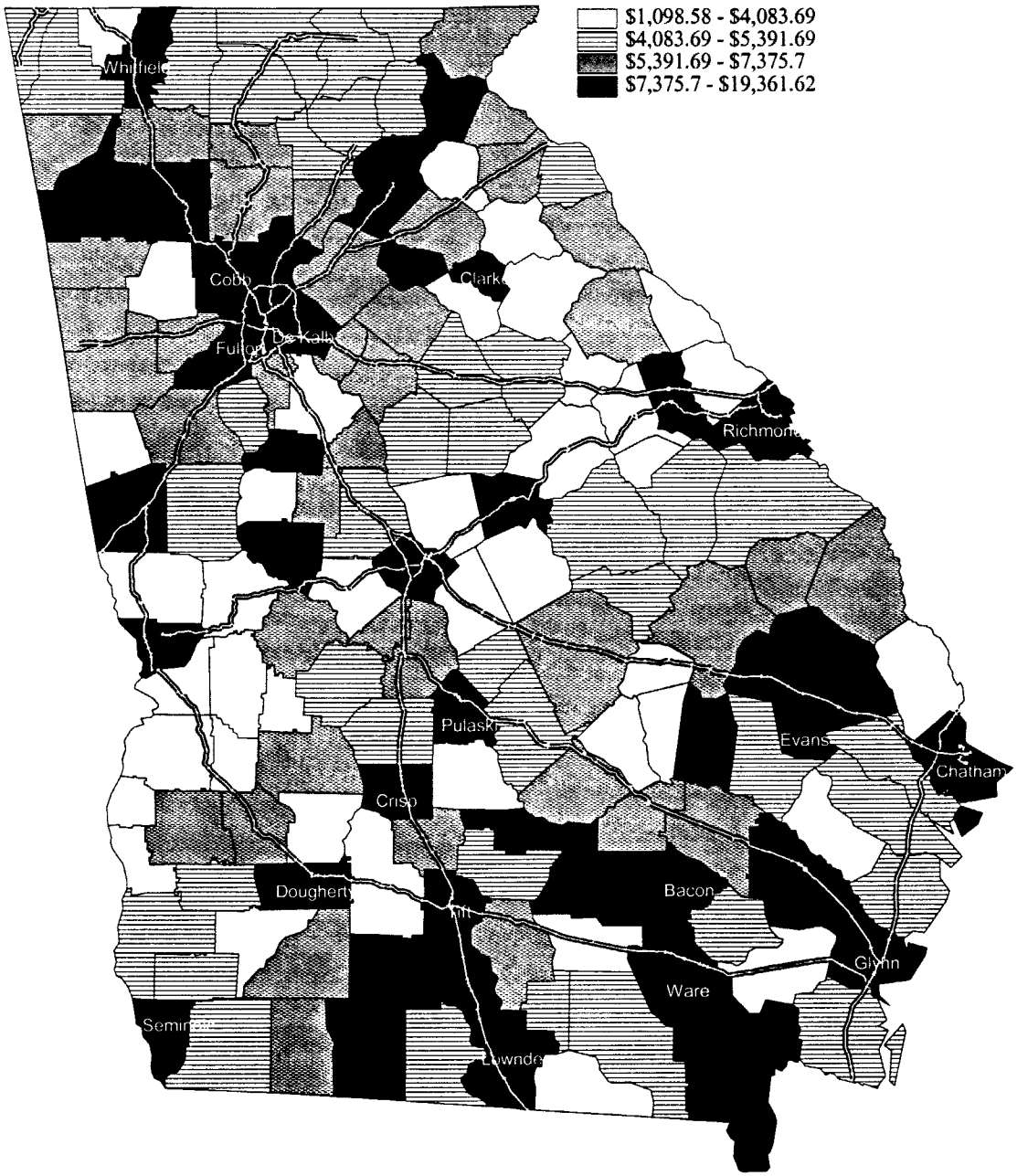
The heaviest concentration of counties in the bottom quartile in 1967 was along the Fall Line Freeway. However, many of the counties containing large cities had one or more bordering county that was in the bottom quartile of per capita sales tax base.

By 1999, the pattern had changed some. More of the counties with large per capita tax bases were in the northern part of the state, while more of the counties with small per capita tax bases were in the southern part of the state. In the southern part of the state, the counties that remained in the top quartile were those containing relatively large cities. Since 1967, top-quartile counties in the northern part of the state have become increasingly concentrated within the Atlanta and Athens MSA. Especially prominent is the growth in per capita sales tax base that occurred in a band of counties just below the northern border of the state.

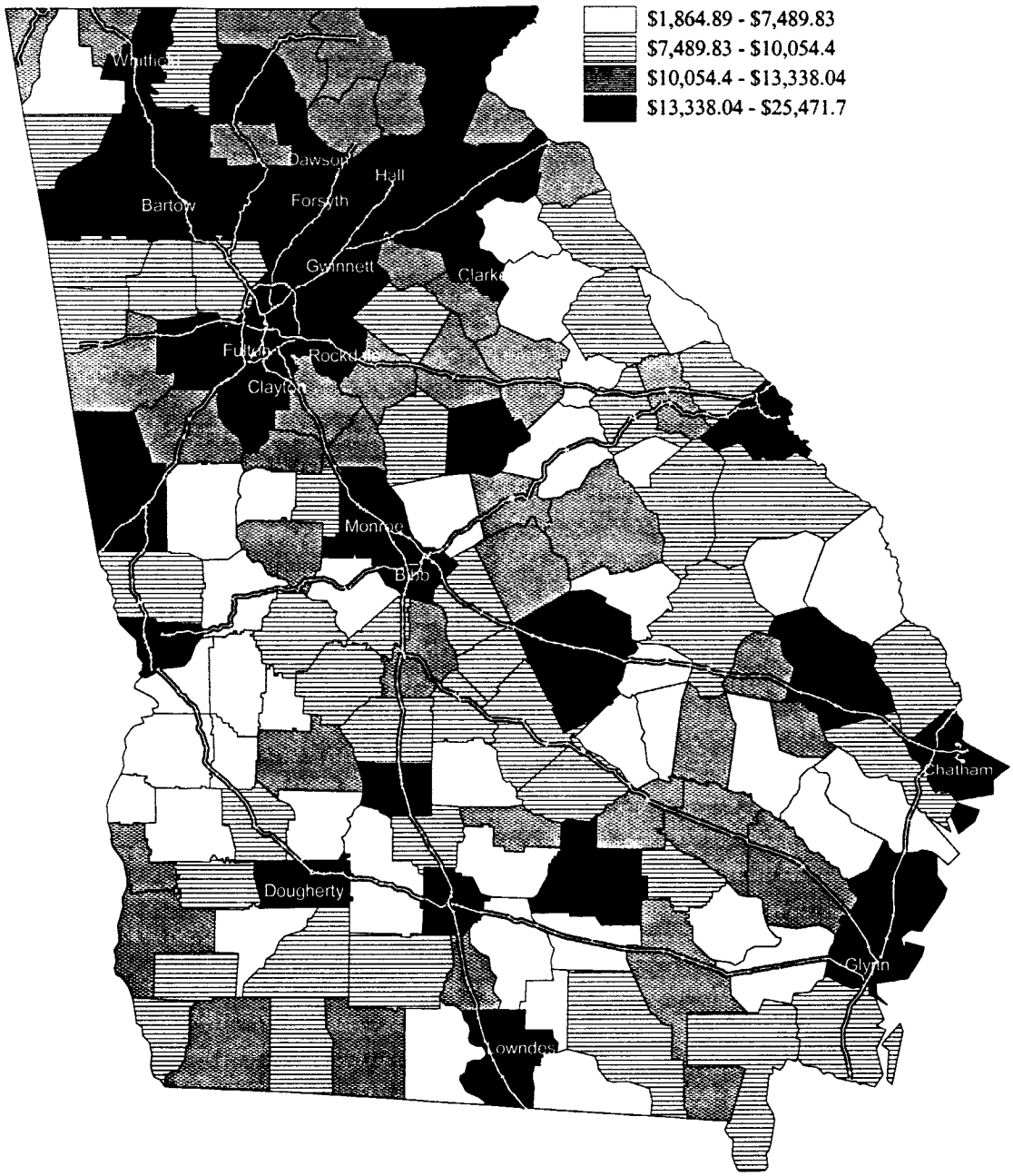
Interestingly, counties with relatively large sales tax base per capita, Richmond (Augusta), Clarke (Athens), Bibb (Macon), Muscogee (Columbus), and Loundes (Valdosta), are in close proximity to counties exhibiting some of the state's lowest levels of sales tax base per capita. One explanation for this relationship is that urban counties capture sales from residents of surrounding counties. This differential indicates a concentration of the sales tax base in larger cities outside the Atlanta MSA.

We define a retail hub as a county with per capita sales tax base that is 50 percent larger than the average, which for 1967, is any county that had a sales tax base per capita greater than $8,634. In 1967, there were 17 counties that qualified as retail hubs, which are labeled with their names (Map 5a). In 1967, 12 of the 17 (70.5 percent) retail hubs were located at or below the Fall Line Freeway. Most retail-hub

MAP 5A. REAL PER CAPITA RETAIL, 1967



MAP 5B. REAL PER CAPITA RETAIL 1999



counties contained relatively large cities; however, Bacon, Pulaski and Seminole in the southern half of the state each contained a total county population of less than 9,000.

By 1999, the location of the retail-hub counties had substantially changed (Map 5b). Although in 1999, nearly the same number of counties, 16, qualified as retail hubs, only 6 (or 37.5 percent) were located at or below the Fall Line Freeway, as opposed to 12 in 1967. Also, in 1967, only three counties in the Atlanta MSA qualified as retail hubs; however, by 1999, the number of retail-hub counties in the Atlanta MSA had doubled.

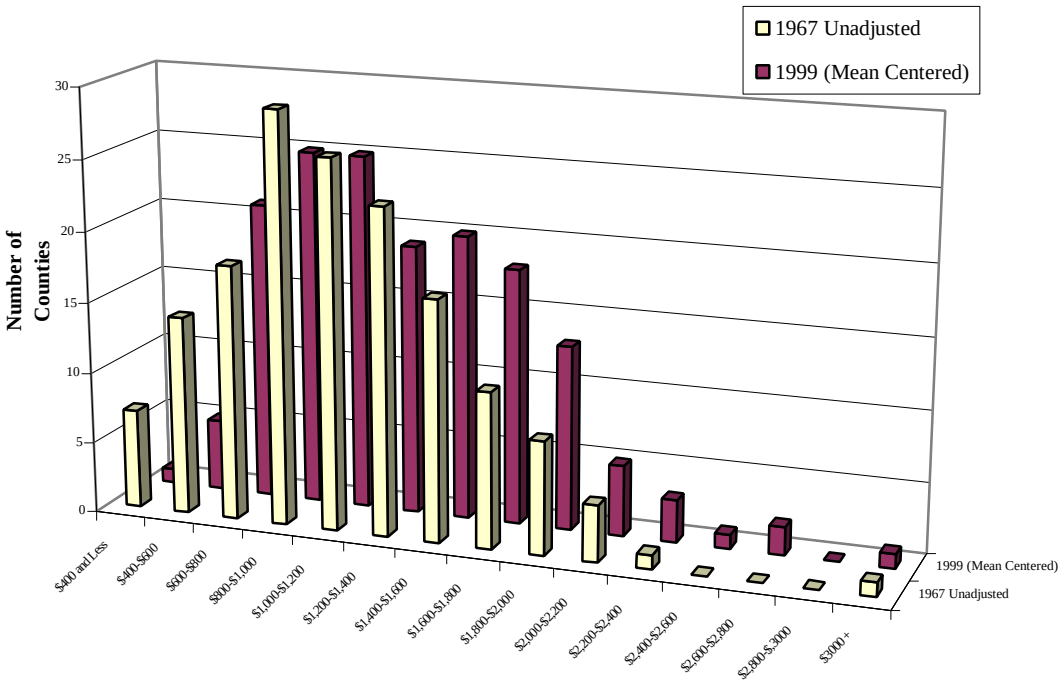
B. Growth in Per Capita Sales Tax Base

Between 1967 and 1999 mean per capita sales tax base (in real terms) increased from $1,155 to $10,740; this makes comparisons between the distributions (Figures 8 and 9) difficult. To allow for a more meaningful comparison of the two distributions, we reduce the 1999 per capita sales tax base for each county by 87.9 percent. The result is a 1999 mean-adjusted distribution of county-level per capita sales tax base which has the same mean as in 1967. Figure 10, which compares the 1967 distribution with the 1999 mean-adjusted distribution of per capita sales tax bases, shows that much of the growth in per capita sales tax base has occurred in the right side of the distribution, i.e., the number of counties in the upper tail has increased. Thus, as compared to 1967, in 1999 more counties have per capita sales tax bases above the state mean. (Note that the numbers along the horizontal axis represent the 1967 per capita sales tax base in nominal dollars.)

Although the distribution of per capita sales tax bases has widened, there is evidence that counties with lower per capita sales tax bases in 1967 had larger percentage increases. The correlation between 1967 per capita sales tax base and the percentage change is –0.48. But there were 10 counties in the bottom quartile in 1967 that were still in the bottom quartile in 1999. The change in the distribution can be illustrated by the change in the ratio of per capita sales tax base for the top quartile (39 counties) to the bottom quartile.[7] For 1967 the ratio was 4.15, i.e., the top 39

[7]We took the total sales tax base of the bottom 39 counties and divided it by the population of those counties.

FIGURE 10. DISTRIBUTION OF COUNTY-LEVEL PER CAPITA SALES TAX BASE, 1967 AND 1999 (MEAN CENTERED)



counties had an average per capita sales tax base that was 4.15 times larger than the bottom 39 counties. By 1999 that ratio had fallen to 2.69.

By comparing the Maps 5a and 5b, one can see that the geographic distribution of per capita sales tax bases has undergone significant changes over the past 32 years. In 1967, several areas of the state, both in the northern and southern regions, had counties with high per capita sales tax base. However, by 1999, the Atlanta-Athens Area stands out as the largest contiguous group of counties in the top quartile of sales tax base per capita (Map 5b). In 1967, five counties in the 20-county Atlanta Metropolitan area were among the top quartile in sales tax base per capita. By 1999, nine counties in the Atlanta metropolitan area were among the top quartile. These increases in per capita sales tax bases in the Atlanta MSA occurred despite a large increase in the populations of these counties. In the highest quartile, counties in the northern half of the state have displaced counties in the southern half. Several counties in the south-central areas of the state dropped out of the top quartile while counties in the northeastern area of the state moved up into the top quartile.

Map 6 depicts growth in retail sales tax base per capita over the period 1967 to 1999. Many of the counties with the highest growth in sales tax base per capita are located primarily along major highways extending north out of Fulton. Especially prominent is a large pocket of counties with large growth in per capita sales tax base extending from along the northeastern side of the Atlanta MSA, through the Athens MSA, and branching out into counties along the northern border of the state.

Many of the counties with the smallest increase in per capita sales tax base are located adjacent to counties with a major city and to counties in urban areas. For example, all of the counties surrounding Tift (Tifton), Dougherty (Albany), and Lowndes (Valdosta) were among those with the smallest increases. Other concentrations of small increases in per capita sales tax base can be found around the Macon MSA, the Savannah MSA, and the Columbus MSA. As can be seen from Map 6, many of the counties with small increases in per capita sales tax bases surround counties with large increases. This is very pronounced in the area surrounding Tift. Notice that the counties bordering Tift had much smaller increases in per capita sales tax than did Tift.

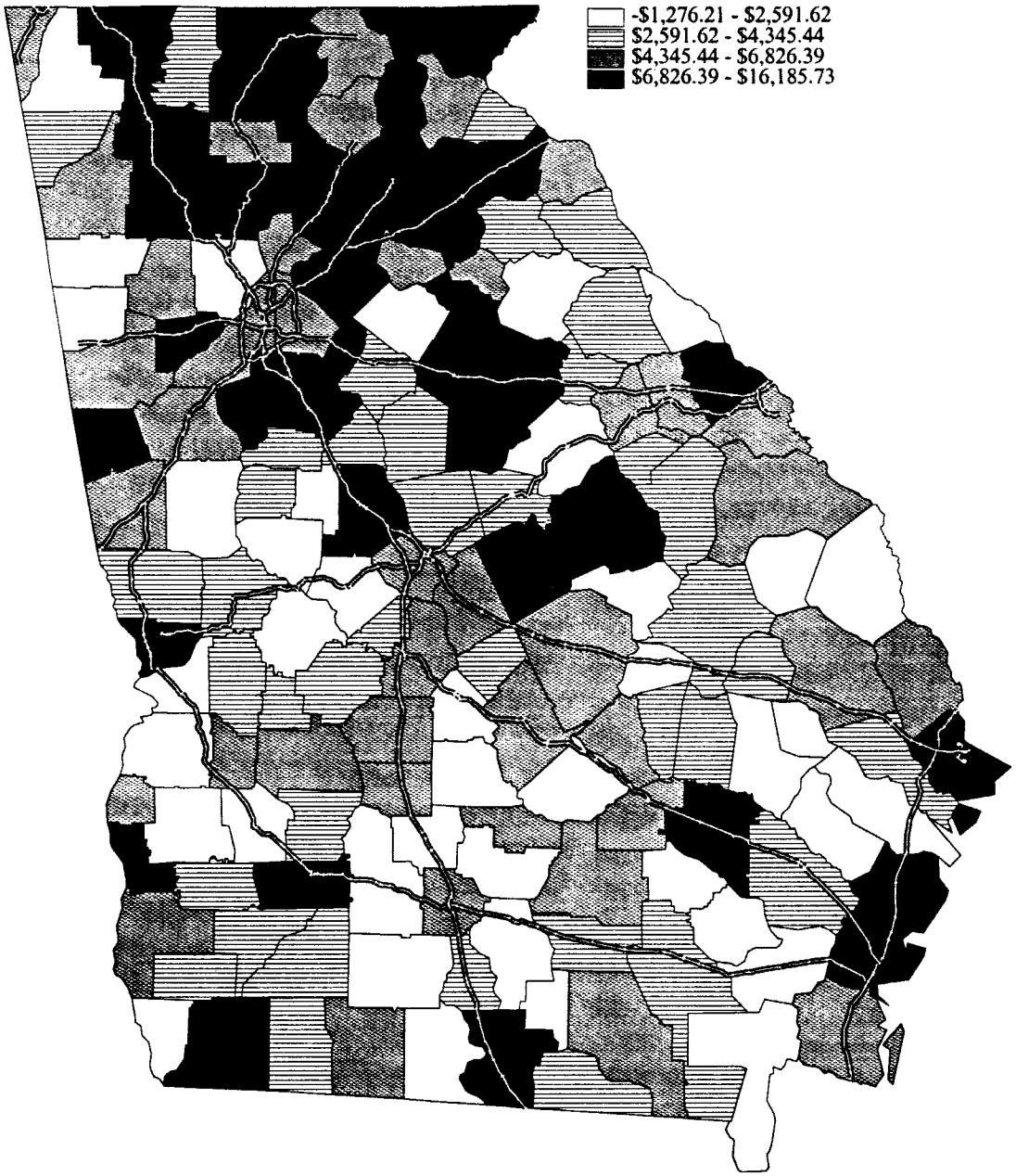
Fulton County was the state's leader in retail sales tax collections per capita in 1967 and remains the leader in 1999. However, the surrounding Atlanta MSA counties have significantly narrowed the gap.

Although most of the high-growth counties are located in the northern area of the state, many counties in other MSAs and those with large cities have experienced substantial growth in per capita sales tax base. In the southern half of the state high per capita growth counties are primarily confined to either core MSA or more urbanized counties.

C. Explaining Growth in Per Capita Sales Tax Base

What factors might explain the differences in the growth in per capita sales tax base? One factor is income. Changes in income may influence a county's sales tax base, i.e., individuals with more real income spend a larger absolute amount on retail purchases than individuals with less real income. Thus, the pattern of per capita income growth across the state may provide insight into the growth of sales tax base.

MAP 6. GROWTH IN PER CAPITA SALES TAX BASE, 1967-1999



Although counties experiencing the strongest absolute growth in per capita income (PCI) are spread across the state, the largest single concentration of high-growth counties is in the Atlanta MSA. Of the 20 Atlanta MSA counties, 12 (60 percent) are among the top quartile (top 39) in PCI growth (Map 7).

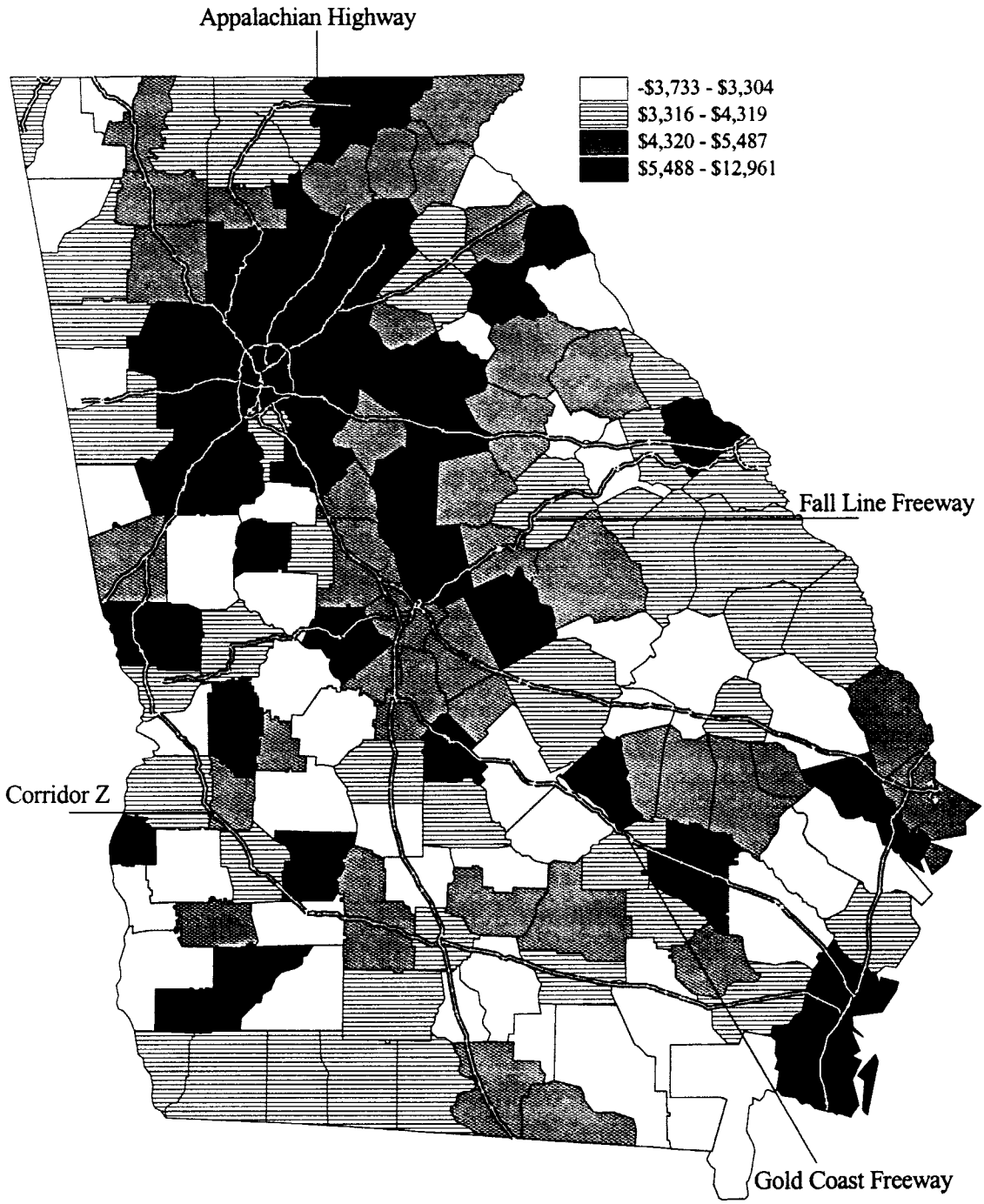
The largest PCI growth occurred in and around Georgia's metropolitan counties; however, with the exception of Atlanta (Fulton County), the largest absolute growth in per capita income has not occurred in the core MSA counties. Instead, the largest PCI growth has occurred in counties that are adjacent to core MSA counties. None of the five other core MSA counties (Chatham, Bibb, Muscogee, Dougherty, or Richmond) is among the top quartile in per capita income growth; yet, each has at least one adjacent county that is. It is in many of these adjacent counties that we have also seen the fastest growth in both sales tax base and sales tax base per capita.

In addition to income, there are other factors that may explain differences in the growth in per capita sales tax base. To explore the possible factors we use Ordinary Least Squares (OLS) regression analysis. The dependent variable is the absolute growth in county per capita sales tax base. The explanatory factors included in the regression are: the initial per capita sales tax base (1967), income growth, population growth, and the presence of a Wal-Mart store.

We found that a larger growth in per capita sales tax base was associated with a higher per capita sales tax base in 1967, indicating that counties with a high starting per capita sales tax base have a fiscal advantage that persists over time. We also found that counties with larger absolute growth in population experienced a significant increase in per capita sales tax base. This is an indication that, for counties with large population increases, the retail base serving that county and the non-exempt business purchases, together, increased faster than the population.

Counties that experienced larger growth in per capita income were more likely to also have experienced higher growth in per capita sales tax base; however, the estimated effect was statistically insignificant. As indicated in Map 7, growth in per capita income may be related more to higher growth rates than larger absolute growth.

MAP 7. GROWTH IN PER CAPITA INCOME, 1969-1997



Surprisingly the presence of a large box-store (i.e., a Wal-Mart) was associated with a negative, but statistically insignificant, effect on the growth in per capita sales tax base for Georgia Counties. One possible reason for this negative relationship is that the presence of a Wal-Mart reduces total value of sales in a county by eliminating competing businesses that sell at higher prices. However, another explanation is that Wal-Marts are locating in counties that are relatively underserved by retail, thus the presence of a Wal-Mart is correlated with already relatively low per capita sales tax base.

D. Section Summary

On the basis of per capita sales tax base, the Atlanta and Athens MSAs have become the predominant location of counties specializing in retail trade. In addition, several other counties in the northern half of the state have experienced strong growth in per capita sales tax base. In the northern half of the state, many of the counties experiencing the highest growth rates in sales tax base are also the counties experiencing the highest growth in per capita sales tax base. Over the period 1967 to 1999, relative to the population the sales tax base has become more concentrated in the northern part of the state and in counties in MSAs and those with larger cities.

The changes in sales tax base, both total and per capita, have important implications for fiscal conditions within the state. As local governments in Georgia have come to rely more heavily on sales tax revenue, the distribution of sales tax bases have become less uniformly distributed across the state.

There are two pronounced changes in the distribution of fiscal capacity implied by the changes in the distribution of sales tax base per capita. First, fiscal capacity in counties in the northern part of the state increased more than in counties in the southern part of the state. Second, fiscal capacity became increasingly concentrated in urban centers, i.e., MSA counties and counties containing larger cities. Within metropolitan areas, suburban counties had larger growth than central counties.

IV. Forces Influencing Retail Location

This section explores reasons for the observed changes in the distribution of per capita sales tax bases. Since an estimated 64 percent of taxable sales are made by individuals (Ring 1999), the location decisions of retailers is an important factor determining the geographic distribution of per capita sales tax base. The other component of sales tax is taxable purchases by businesses. These purchases are largely made from retailers and wholesalers.[8] We focus on the location decision of retailers in explaining changes in the geographic distribution of per capita sales tax bases.

Retailers face a mix of different forces that they must weigh in the consideration of where they will locate within the state. Chief among these factors are market area, access to transportation, and agglomeration economies.

The market area is that region serviced by a particular retail establishment and is determined primarily by the density of demand (the amount of demand per square mile) for the good or service provided by the firm. As the density of demand increases, the area needed to support that firm decreases (i.e., one would expect to see more gas stations than airplane retailers per square mile). For Georgia, density of demand plays a central role in determining where retail sales tax base is most concentrated. The areas with the greatest absolute growth and the fastest growth in both sales tax base and sales tax base per capita are predominantly comprised of counties with relatively large and fast growing populations. The density of demand is greater near densely populated cities. This is the reason we see dense patches of retail in the heavily populated counties around Atlanta and around other large Georgia cities like Savannah, Macon, Augusta, Valdosta, and Columbus.

[8]Some businesses also pay use tax on some items purchased from out-of-state vendors. The revenue from these sales are allocated to the county in which the business is located.

In addition to higher visibility, better transportation access means less expensive distribution of goods to the retailers. In Georgia, transportation is of both current and historical importance. The City of Atlanta owes much of its origin to the fact that it was the site of the intersection of major rail lines (Garrison 1987). Maps 1 and 2 show that many of the high-growth and high growth-rate counties have access to more than one major highway or lie near intersections of multiple major highways. Although counties like Fulton, Muscogee, and Bibb have exhibited slow growth given their relative level of interstate access, this is most likely because of their more mature retail base. (Chatham, Cobb, and DeKalb may also be approaching this level of retail maturity.)

Even though better access to transportation is viewed as a benefit to retail as a whole, this may not be true for individual retail locations. Better access also lowers the cost to the individual of shopping at more distant stores. A firm without interstate access might attract shoppers from a 15-mile radius, whereas, a similar firm with interstate access might be able to attract not only the shoppers within the 15-mile radius but also shoppers from 30 miles along the interstates. Locally this can either have positive or negative effects. Better access is a benefit for local retail firms that are able to extend their effective market area. However, this means some individuals are shopping further from their residence and possibly outside their home counties. Thus, the effect of increased access to transportation on stores near the shopper who is willing to travel is negative (i.e., local retail loses shoppers to the more distant retailers). This may be the reason for the persistent low and slow growth experienced by counties located near major interstates between large cities in southern areas of the state. Counties containing relatively large cities, and consequentially large retail bases, are attracting shoppers along major roads in South Georgia. These are shoppers who, in the absence of roads, might shop more locally.

However, one may question why an individual might travel further to shop when the same goods are available locally. It may be that retail-center counties provide the goods at a significant cost savings and are able to do so because of agglomeration economies that exist in the retail industry.

Agglomeration economies are the benefits firms experience when they locate near each other. On the surface it might appear that retail firms would always generate the most sales if they located in an area that was distant from other competing retail firms. However, in many instances, being located near another competing firm may actually increase both firms' business volume or lower the costs associated with bringing goods to market. An area of relatively concentrated retail may attract more shoppers than an equal amount of disbursed retail because the shopper incurs the cost of one trip but may shop in several stores. Retailers may also be able to attract incidental shoppers who made the shopping trip for another reason or who are comparison-shopping. Retail firms may also be able to lower the cost of business by sharing a common facility, like parking lots or a mall complex, or through the development of supporting businesses like shipping and warehousing. Agglomeration effects play a major role in the development of retail centers in Georgia. Counties that already had a sizable retail base in 1967 are in large part the same counties that have experienced the largest and fastest growth in retail sales tax base over the past 32 years.

Another force is the rise of the large box stores. To the extent that these stores displace multiple smaller stores and locate in close proximity to one another, the increase in the large box stores results in greater concentration of retail sales at one site.

The rise of Wal-Mart typifies this transition that has occurred in the retail industry. Currently Wal-Mart has over 100 locations in Georgia, representing one of the largest and most pervasive single retailers in the state. [9] Wal-Mart provides an interesting case study of a single retail firm and its location choices within Georgia. Though we choose to look specifically at Wal-Mart we are not implying a causal relationship between growth in sales tax base or population growth and Wal-Mart location decisions. [10]

[9]Store locations were obtained from the 1999 Wal-Mart Atlas, which contained a detailed listing of store locations for the entire United States.
[10]Wal-Mart locations in Maps 8, 9a and 9b include Sam's Clubs.

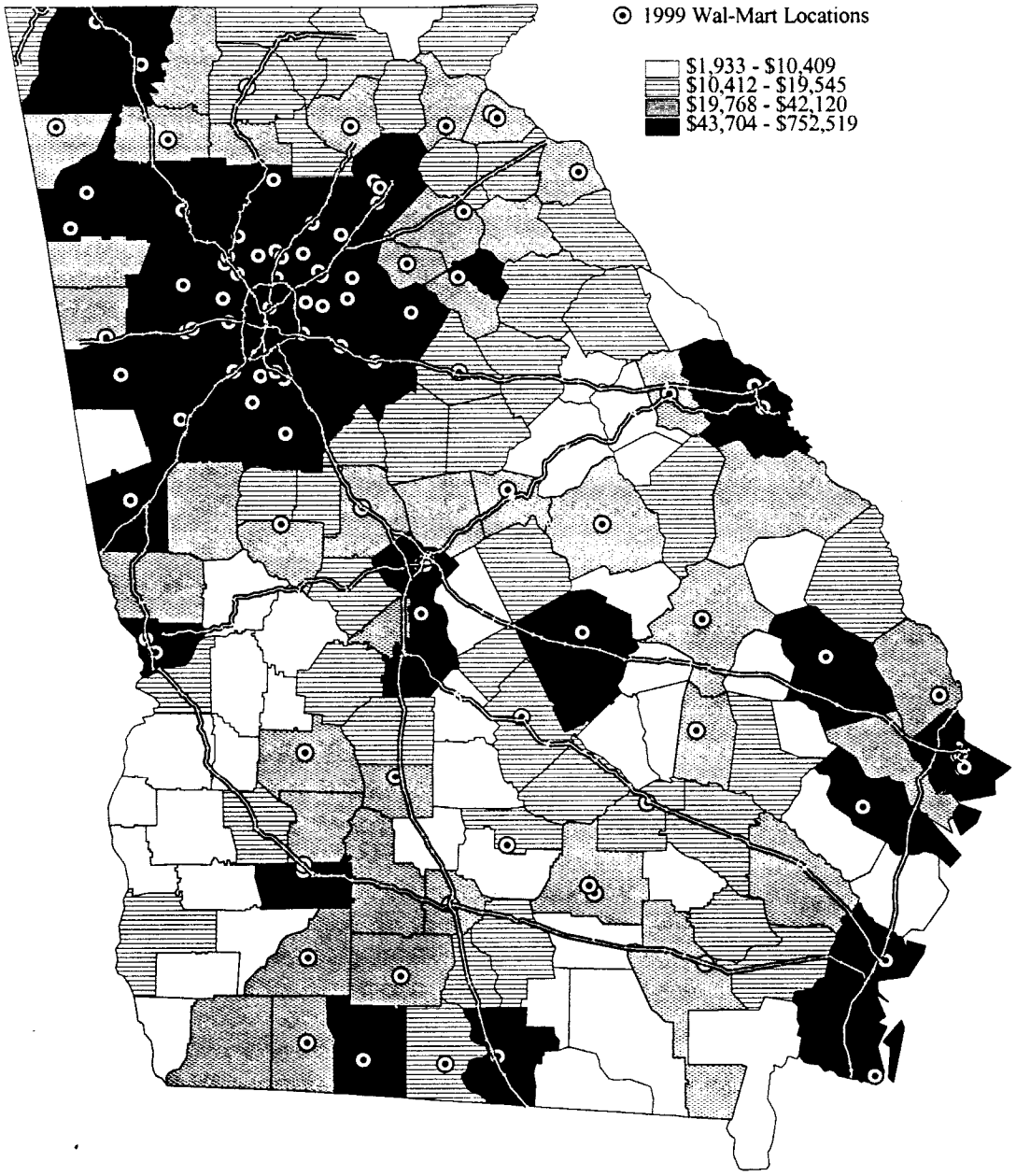
Not surprisingly, Wal-Mart has chosen to locate many of its stores in counties with concentrated populations or in counties that have experienced large population growth. In 1999, all but two counties in the top population quartile contained one or more Wal-Mart locations (Map 8). Of the more than one hundred Georgia stores, none are located in counties in the bottom population quartile.

Access to interstate highways and other major roads also appears to be important. Wal-Mart locations are heavily concentrated in the Atlanta MSA counties, especially on or around interstate highways extending out of the northern I-285 perimeter. Outside the Atlanta MSA, Wal-Mart locations are more disbursed geographically, but they continue to be located on or near Georgia's major interstates and highways. Casual observation reveals that counties without access to interstates are less likely to contain a Wal-Mart location than counties with access.

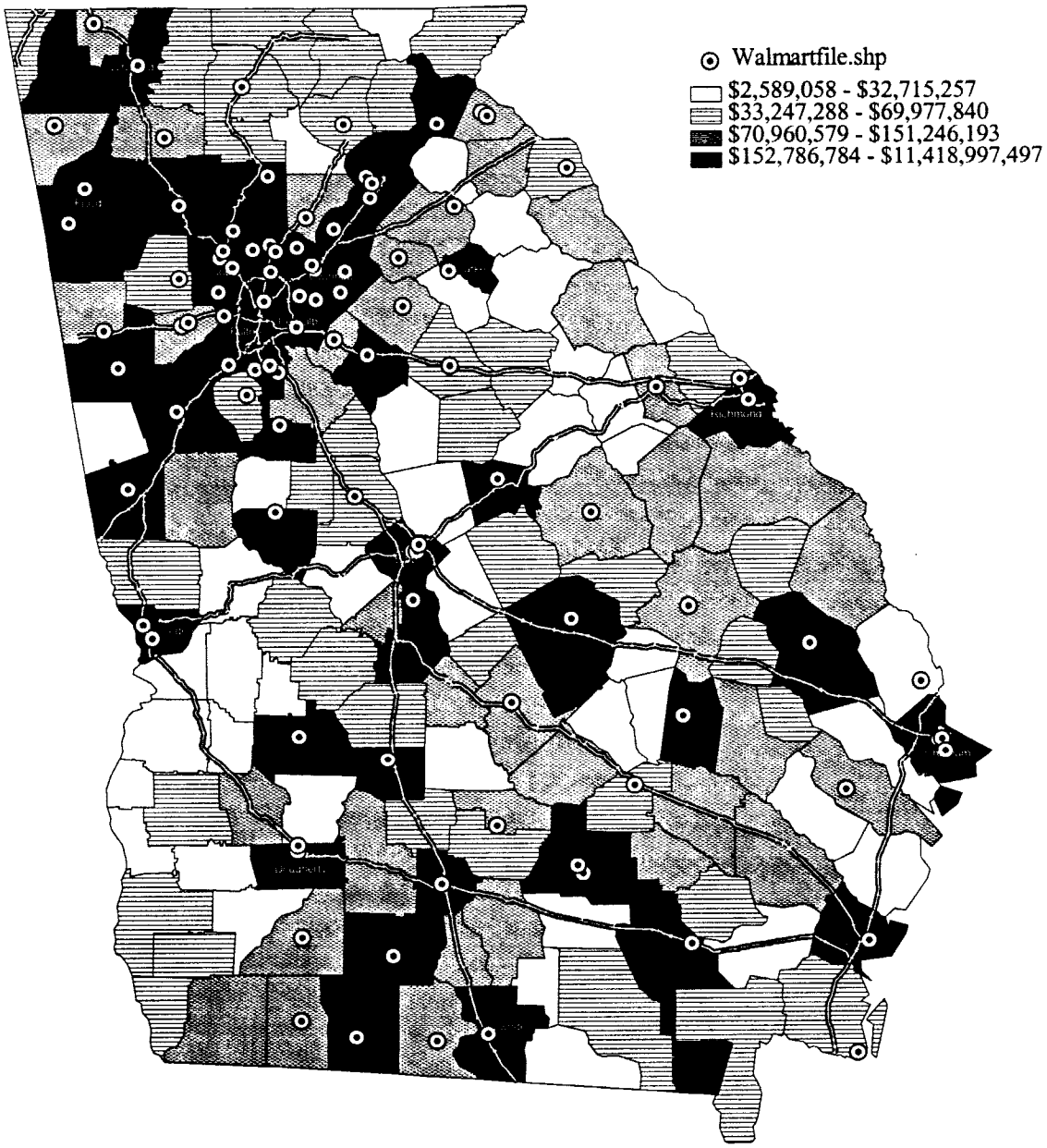
Interestingly, though most of the Atlanta area has a relatively high population density, Wal-Mart had only one store located within the I-285 perimeter in 1999 (but since closed). Counties outside of metropolitan areas that contain a Wal-Mart typically contain only one, and this store is usually located near the center of the county in what is most likely the county seat and/or largest city.

Wal-Marts are frequently located in counties that in 1967 were among the top quartile in terms of sales tax base (Maps 9a and 9b). A high initial sales tax base may provide big box retailers like Wal-Mart with an indication that population is dense enough or per capita income is sufficient to support large-scale retail.

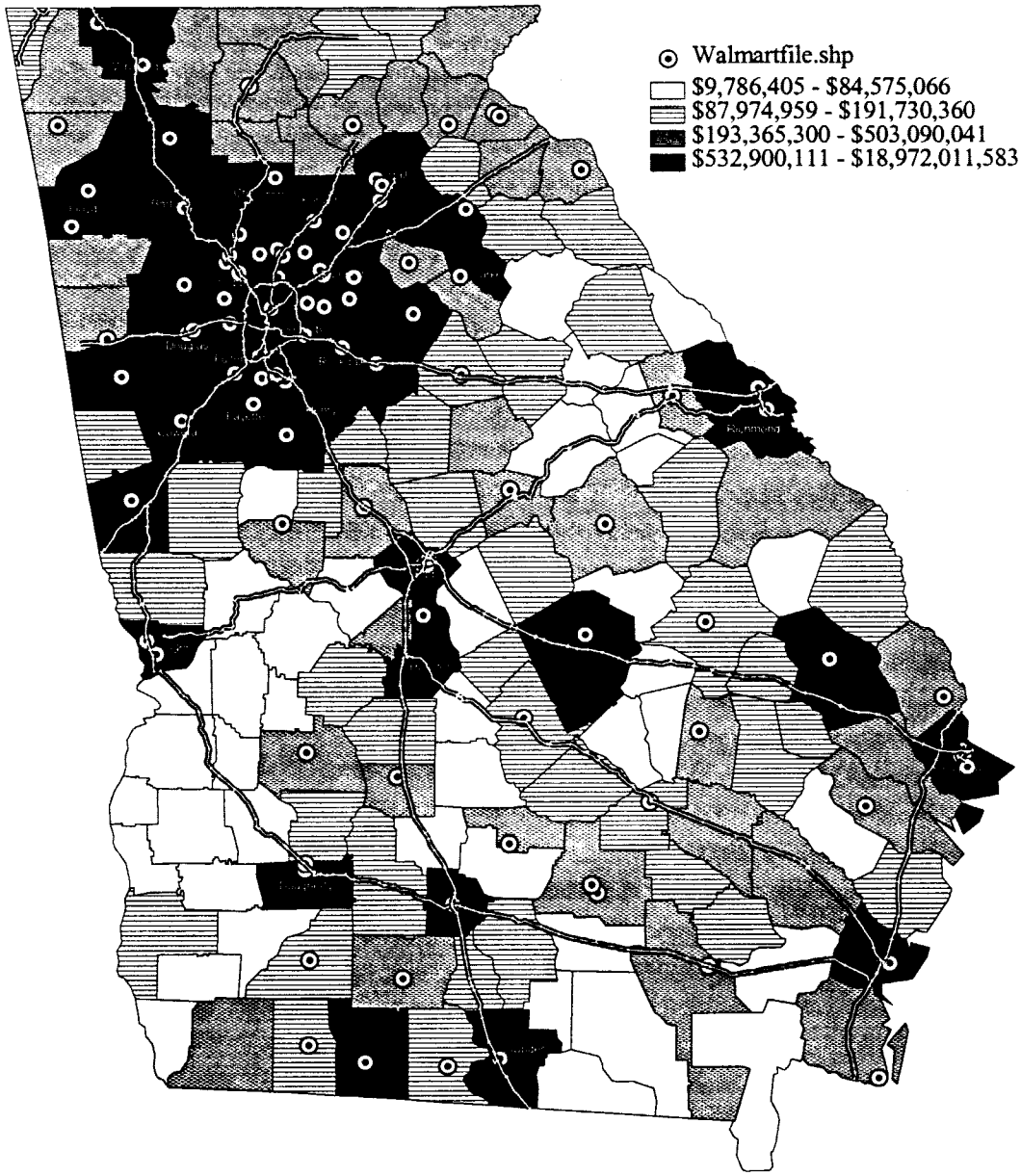
MAP 8. WAL-MART LOCATIONS AND POPULATION, 1999



MAP 9A. WAL-MART LOCATIONS AND SALES TAX BASE, 1967



MAP 9B. WAL-MART LOCATIONS AND SALES TAX BASE, 1999



V. Fiscal Implications of Differential Retail Growth

In Georgia, the sales tax is becoming increasingly relied upon as both a primary source of revenue for local expenditures and as a supplement (and sometimes alternative) to the property tax. Among the reasons for this shift include the unpopularity of the property tax as an equitable means for funding local government, and the revenue potential of the sales tax brought about by the sustained economic growth experienced by many counties in Georgia. As counties shift their reliance toward the sales tax for such projects as education and county improvements, a question arises: Can the sales tax base provide an equitable and reliable revenue source for all of Georgia's counties.

The evidence presented shows that the sales tax base, both total and per capita, is unevenly distributed among counties. Furthermore, over time, it has become even more unevenly distributed. This has important consequences for local governmental fiscal conditions within the state .

The growth in sales tax base in the northern half of Georgia has out -paced that in the southern half in both magnitude and in speed. The result is a larger differential in fiscal capacity between the north and south than existed in 1967. In addition, based on the historic differential rates of growth in sales tax base between the north and the south, we expect that the gap will widen in the future.

It might be expected that rural counties with small initial tax bases would experience a higher rate of growth in their base than counties with an already large and established sales tax bases. Thus, rural fiscal capacity would increase faster than urban fiscal capacity, eventually leading to increased equality in fiscal capacity. We have found little support for this. The growth in the sales tax base in urban areas of the state has outpaced the growth in the rural areas of the state. Many of the urban counties that contain some of the largest sales tax bases in the state have also been those with the fastest growing sales tax bases.

From a geographic perspective, counties with the highest sales tax base have become more densely concentrated around the state's core metropolitan counties and in counties with large cities. This is evident in both the northern and southern parts of the state; however, Fulton and the immediately surrounding counties comprise the state's focal point of absolute growth in sales tax base.

Counties with the fastest growth in sales tax base have been those that lie at the outer edge of the state's metropolitan areas, in what normally is considered the suburbs of the larger cities in Georgia.

Counties with the lowest sales tax base and the lowest growth in sales tax base, measured on both an absolute and per capita basis, have become more concentrated in the southern half of the state in counties that are either lightly populated or counties that lie between two relatively large south-Georgia cities, or both.[11]

In short, the sales tax base component of local government fiscal capacity in Georgia is becoming urbanized faster than the population is. This is likely due to residents of rural counties traveling into larger cities to shop. The result is a net transfer of sales tax base from less urban to more urban counties. As a consequence we have seen a relative increase in the state's urban fiscal capacity over rural fiscal capacity. And, more specifically, there has been an increase in Georgia's northern urban and urbanizing counties' fiscal capacity relative to much of the rest of the state.

This has important consequences for local governmental fiscal conditions within the state. The likely effect of the differential fiscal capacity on counties in the southern half of the state is a relatively lower ability to provide government services that are funded through the sales tax. This is also true for some rural counties in the northern half of the state. The differences in fiscal capacity may potentially lead to differential levels or quality of public services. Furthermore, the high concentration of relatively low-fiscal capacity counties in the southern area of the state creates the potential of a large contiguous region within Georgia which provides low levels of government services.

[11]Notable exceptions are Fulton and Bibb. Their low growth rates are due to a large initial base.

References

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Appendix A. Sales Tax Receipts Data

The data used come from the Georgia Department of Revenue's *Annual Statistical Report* and from the Georgia Department of Revenue Consolidation Sheet. For 1967 we use the state's share of the counties' sales tax collections to measure county-level sales tax bases. Counties with sales taxes levied after the food exemption was implemented are adjusted to reflect a base as if it includes food. From the state sales tax data we estimated the value of taxable sales base in a county by dividing the dollar amount of state's share of sales tax collections in each county by state sales tax rate in effect in 1967, i.e., 3 percent. State share of sales tax collections are not reported after 1994 in the Annual Statistical Reports. For this reason, for 1999[12], we use the Consolidation Sheets. The Consolidation sheets list the sales tax disbursements made to local governments from the Department of Revenue. From the disbursements and the local sales tax rate in effect in each county, we can estimate the county-level sales tax bases.

[12] 1999 is the most current data available.

Appendix B. County-Level Data

County	Sales Tax Base 1967 (in 1999 Dol. X 1000)	Sales Tax Base Per Capita 1967 (in 1999 dollars)	Sales Tax Base 1999 (X 1,000)	Sales Tax Base Per Capita 1999	Absolute Growth (X 1,000)	Absolute Growth In Sales Tax Base Per Capita	Percent Change in Sales Tax Base, 1967-1999	Percent Change in Sales Tax Base Per Capita, 1967-1999	1967 Rank	1999 Rank
APPLING	$ 83,362	$ 5,914	$ 222,412	$ 13,338	$ 139,050	$ 7,424	167%	126%	67	73
ATKINSON	$ 23,168	$ 3,927	$ 48,969	$ 6,713	$ 25,802	$ 2,786	111%	71%	136	136
BACON	$ 74,760	$ 8,734	$ 94,108	$ 9,079	$ 19,348	$ 346	26%	4%	75	117
BAKER	$ 17,645	$ 3,952	$ 26,748	$ 7,395	$ 9,103	$ 3,443	52%	87%	143	154
BALDWIN	$ 206,405	$ 8,016	$ 482,559	$ 11,440	$ 276,154	$ 3,424	134%	43%	29	41
BANKS	$ 21,261	$ 2,923	$ 180,368	$ 13,700	$ 159,107	$ 10,777	748%	369%	139	86
BARROW	$ 122,131	$ 7,456	$ 503,090	$ 12,010	$ 380,959	$ 4,553	312%	61%	48	40
BARTOW	$ 237,903	$ 7,526	$ 1,218,051	$ 16,326	$ 980,148	$ 8,800	412%	117%	25	24
BEN HILL	$ 111,345	$ 7,786	$ 212,057	$ 12,136	$ 100,712	$ 4,349	90%	56%	52	75
BERRIEN	$ 87,400	$ 7,302	$ 107,954	$ 6,531	$ 20,554	$ (770)	24%	-11%	63	111
BIBB	$1,613,427	$ 11,059	$ 2,699,446	$ 17,366	$1,086,019	$ 6,307	67%	57%	4	9
BLECKLEY	$ 50,032	$ 5,163	$ 89,371	$ 7,899	$ 39,339	$ 2,736	79%	53%	103	118
BRANTLEY	$ 22,318	$ 3,585	$ 79,843	$ 5,746	$ 57,525	$ 2,161	258%	60%	138	122
BROOKS	$ 75,033	$ 4,794	$ 94,454	$ 5,859	$ 19,421	$ 1,064	26%	22%	74	116
BRYAN	$ 29,924	$ 4,483	$ 193,914	$ 7,949	$ 163,991	$ 3,466	548%	77%	124	78
BULLOCH	$ 210,667	$ 7,905	$ 699,316	$ 13,772	$ 488,649	$ 5,867	232%	74%	28	30
BURKE	$ 86,446	$ 4,089	$ 230,178	$ 9,914	$ 143,733	$ 5,825	166%	142%	65	70
BUTTS	$ 64,810	$ 6,797	$ 186,130	$ 10,127	$ 121,320	$ 3,330	187%	49%	87	82
CALHOUN	$ 32,715	$ 4,406	$ 37,091	$ 7,514	$ 4,376	$ 3,108	13%	71%	120	147
CAMDEN	$ 52,429	$ 4,891	$ 467,529	$ 9,941	$ 415,100	$ 5,050	792%	103%	99	43
CANDLER	$ 61,696	$ 8,366	$ 110,682	$ 12,363	$ 48,986	$ 3,997	79%	48%	90	109
CARROLL	$ 275,540	$ 6,880	$ 1,041,088	$ 12,282	$ 765,548	$ 5,402	278%	79%	21	26
CATOOSA	$ 101,010	$ 4,084	$ 619,117	$ 11,883	$ 518,107	$ 7,800	513%	191%	57	34
CHARLTON	$ 45,429	$ 7,887	$ 72,759	$ 7,690	$ 27,330	$ (197)	60%	-3%	107	126
CHATHAM	$1,836,026	$ 10,114	$ 4,060,720	$ 17,995	$2,224,694	$ 7,881	121%	78%	3	6
CHATTAHOOCHEE	$ 10,244	$ 1,099	$ 31,058	$ 1,865	$ 20,814	$ 766	203%	70%	153	152
CHATTOOGA	$ 138,034	$ 6,465	$ 210,233	$ 9,197	$ 72,198	$ 2,732	52%	42%	43	76
CHEROKEE	$ 173,896	$ 6,942	$ 1,958,139	$ 13,820	$1,784,243	$ 6,878	1026%	99%	34	11
CLARKE	$ 623,734	$ 11,931	$ 1,604,203	$ 17,699	$ 980,470	$ 5,768	157%	48%	9	13
CLAY	$ 14,521	$ 3,747	$ 37,942	$ 10,767	$ 23,422	$ 7,020	161%	187%	147	145
CLAYTON	$ 499,792	$ 6,859	$ 4,925,212	$ 23,044	$4,425,420	$ 16,186	885%	236%	13	5
CLINCH	$ 33,247	$ 4,815	$ 64,540	$ 9,666	$ 31,293	$ 4,851	94%	101%	119	129
COBB	$1,450,948	$ 9,099	$ 5,439,574	$ 9,322	$3,988,627	$ 223	275%	2%	7	4
COFFEE	$ 173,230	$ 8,011	$ 478,822	$ 13,697	$ 305,592	$ 5,686	176%	71%	35	42
COLQUITT	$ 253,897	$ 7,672	$ 409,455	$ 10,054	$ 155,558	$ 2,383	61%	31%	23	48
COLUMBIA	$ 39,778	$ 2,172	$ 867,309	$ 9,295	$ 827,531	$ 7,123	2080%	328%	114	27
COOK	$ 91,678	$ 7,614	$ 166,731	$ 10,971	$ 75,053	$ 3,357	82%	44%	60	91
COWETA	$ 203,846	$ 6,431	$ 1,185,266	$ 13,258	$ 981,421	$ 6,826	481%	106%	30	25
CRAWFORD	$ 19,878	$ 3,463	$ 46,934	$ 4,507	$ 27,057	$ 1,044	136%	30%	140	138
CRISP	$ 180,682	$ 9,865	$ 300,687	$ 14,570	$ 120,004	$ 4,705	66%	48%	33	56
DADE	$ 40,409	$ 4,404	$ 166,711	$ 10,865	$ 126,302	$ 6,461	313%	147%	112	92
DAWSON	$ 18,237	$ 4,870	$ 286,870	$ 17,991	$ 268,633	$ 13,122	1473%	269%	141	58
DECATUR	$ 123,769	$ 5,169	$ 331,069	$ 12,204	$ 207,300	$ 7,035	167%	136%	47	52

Appendix B (Continued). County-Level Data

County	Sales Tax Base 1967 (in 1999 Dol. X 1000)	Sales Tax Base Per Capita 1967 (in 1999 dollars)	Sales Tax Base 1999 (X 1,000)	Sales Tax Base Per Capita 1999	Absolute Growth (X 1,000)	Absolute Growth In Sales Tax Base Per Capita	Percent Change in Sales Tax Base, 1967-1999	Percent Change in Sales Tax Base Per Capita, 1967-1999	1967 Rank	1999 Rank
DEKALB	$2,827,075	$ 8,807	$ 9,281,264	$ 15,550	$6,454,189	$ 6,743	228%	77%	2	3
DODGE	$ 76,351	$ 4,516	$ 161,488	$ 8,899	$ 85,137	$ 4,383	112%	97%	73	93
DOOLY	$ 50,750	$ 4,338	$ 98,459	$ 9,437	$ 47,709	$ 5,100	94%	118%	101	115
DOUGHERTY	$ 773,416	$ 8,970	$ 1,523,904	$ 16,198	$ 750,488	$ 7,228	97%	81%	8	15
DOUGLAS	$ 124,208	$ 5,467	$ 1,356,215	$ 14,875	$1,232,007	$ 9,408	992%	172%	46	20
EARLY	$ 69,978	$ 4,760	$ 134,408	$ 11,083	$ 64,431	$ 6,323	92%	133%	80	100
ECHOLS	$ 2,589	$ 1,304	$ 11,731	$ 4,629	$ 9,142	$ 3,325	353%	255%	159	158
EFFINGHAM	$ 27,813	$ 2,283	$ 340,193	$ 8,866	$ 312,380	$ 6,584	1123%	288%	126	51
ELBERT	$ 107,605	$ 6,163	$ 183,299	$ 9,466	$ 75,694	$ 3,304	70%	54%	54	83
EMANUEL	$ 113,182	$ 5,764	$ 181,253	$ 8,614	$ 68,071	$ 2,850	60%	49%	51	84
EVANS	$ 65,063	$ 8,852	$ 102,451	$ 10,155	$ 37,388	$ 1,303	57%	15%	86	114
FANNIN	$ 63,121	$ 4,312	$ 227,572	$ 12,012	$ 164,452	$ 7,701	261%	179%	89	71
FAYETTE	$ 43,522	$ 4,284	$ 1,419,543	$ 15,367	$1,376,020	$ 11,083	3162%	259%	109	17
FLOYD	$ 598,451	$ 8,224	$ 1,286,158	$ 15,041	$ 687,706	$ 6,817	115%	83%	10	23
FORSYTH	$ 85,886	$ 5,534	$ 1,544,951	$ 15,979	$1,459,065	$ 10,445	1699%	189%	66	14
FRANKLIN	$ 88,586	$ 6,278	$ 264,905	$ 13,718	$ 176,320	$ 7,440	199%	118%	62	63
FULTON	$11,418,997	$ 19,362	$18,972,012	$ 25,472	$7,553,014	$ 6,110	66%	32%	1	1
GILMER	$ 48,093	$ 5,202	$ 299,586	$ 15,157	$ 251,493	$ 9,955	523%	191%	105	57
GLASCOCK	$ 7,717	$ 2,929	$ 17,519	$ 6,886	$ 9,802	$ 3,958	127%	135%	155	155
GLYNN	$ 448,120	$ 8,893	$1,382,937	$ 20,354	$ 934,817	$ 11,461	209%	129%	15	18
GORDON	$ 131,684	$ 5,891	$ 635,062	$ 15,133	$ 503,378	$ 9,242	382%	157%	45	32
GRADY	$ 110,958	$ 5,739	$ 189,473	$ 8,772	$ 78,516	$ 3,033	71%	53%	53	81
GREENE	$ 49,714	$ 4,590	$ 167,644	$ 11,895	$ 117,929	$ 7,304	237%	159%	104	90
GWINNETT	$ 399,354	$ 6,740	$12,046,261	$ 22,078	$11,646,907	$ 15,337	2916%	228%	16	2
HABERSHAM	$ 152,787	$ 7,685	$ 454,309	$ 13,966	$ 301,522	$ 6,280	197%	82%	39	45
HALL	$ 475,400	$ 8,454	$2,002,138	$ 16,239	$ 1,526,738	$ 7,785	321%	92%	14	10
HANCOCK	$ 28,110	$ 2,986	$ 42,361	$ 4,683	$ 14,251	$ 1,697	51%	57%	125	142
HARALSON	$ 96,723	$ 5,835	$ 197,215	$ 7,867	$ 100,491	$ 2,031	104%	35%	59	77
HARRIS	$ 47,206	$ 3,871	$ 170,734	$ 7,543	$ 123,528	$ 3,672	262%	95%	106	88
HART	$ 69,929	$ 4,228	$ 230,563	$ 10,421	$ 160,634	$ 6,194	230%	146%	81	69
HEARD	$ 12,774	$ 2,271	$ 161,444	$ 15,390	$ 148,671	$ 13,119	1164%	578%	150	94
HENRY	$ 81,466	$ 3,568	$1,360,186	$ 11,990	$ 1,278,720	$ 8,422	1570%	236%	68	19
HOUSTON	$ 320,425	$ 5,794	$1,289,161	$ 11,976	$ 968,736	$ 6,182	302%	107%	19	22
IRWIN	$ 41,094	$ 4,548	$ 53,176	$ 5,792	$ 12,082	$ 1,244	29%	27%	111	133
JACKSON	$ 140,598	$ 6,668	$ 552,620	$ 14,149	$ 412,022	$ 7,481	293%	112%	42	37
JASPER	$ 26,837	$ 4,325	$ 87,975	$ 8,308	$ 61,138	$ 3,983	228%	92%	128	119
JEFF DAVIS	$ 61,103	$ 6,280	$ 150,805	$ 11,861	$ 89,702	$ 5,581	147%	89%	92	97
JEFFERSON	$ 86,478	$ 5,154	$ 151,459	$ 8,481	$ 64,981	$ 3,328	75%	65%	64	96
JENKINS	$ 52,678	$ 5,729	$ 52,548	$ 6,255	$ (130)	$ 526	0%	9%	98	134
JOHNSON	$ 40,350	$ 4,847	$ 43,216	$ 5,211	$ 2,865	$ 364	7%	8%	113	141
JONES	$ 32,236	$ 3,024	$ 168,668	$ 7,237	$ 136,432	$ 4,213	423%	139%	122	89
LAMAR	$ 69,278	$ 6,397	$ 114,632	$ 7,637	$ 45,353	$ 1,240	65%	19%	83	107
LANIER	$ 23,473	$ 4,810	$ 36,927	$ 5,306	$ 13,454	$ 496	57%	10%	133	148

Appendix B (Continued). County-Level Data

County	Sales Tax Base 1967 (in 1999 Dol. X 1000)	Sales Tax Base Per Capita 1967 (in 1999 dollars)	Sales Tax Base 1999 (X 1,000)	Sales Tax Base Per Capita 1999	Absolute Growth (X 1,000)	Absolute Growth In Sales Tax Base Per Capita	Percent Change in Sales Tax Base, 1967-1999	Percent Change in Sales Tax Base Per Capita, 1967-1999	1967 Rank	1999 Rank
LAURENS	$ 233,504	$ 6,877	$ 591,397	$ 13,463	$ 357,893	$ 6,586	153%	96%	27	35
LEE	$ 12,640	$ 1,776	$ 117,346	$ 5,027	$ 104,706	$ 3,251	828%	183%	151	105
LIBERTY	$ 74,604	$ 5,276	$ 424,782	$ 7,116	$ 350,177	$ 1,840	469%	35%	76	46
LINCOLN	$ 23,119	$ 3,790	$ 49,644	$ 5,953	$ 26,525	$ 2,163	115%	57%	137	135
LONG	$ 9,955	$ 2,606	$ 31,569	$ 3,625	$ 21,614	$ 1,019	217%	39%	154	150
LOWNDES	$ 503,572	$ 9,713	$1,435,515	$ 16,807	$ 931,942	$ 7,094	185%	73%	12	16
LUMPKIN	$ 37,444	$ 4,319	$ 214,560	$ 10,852	$ 177,116	$ 6,533	473%	151%	116	74
MACON	$ 66,081	$ 4,915	$ 119,033	$ 9,068	$ 52,952	$ 4,154	80%	85%	85	104
MADISON	$ 30,203	$ 2,358	$ 132,029	$ 5,238	$ 101,826	$ 2,880	337%	122%	123	101
MARION	$ 18,177	$ 3,195	$ 43,867	$ 6,471	$ 25,689	$ 3,276	141%	103%	142	139
MCDUFFIE	$ 121,369	$ 8,505	$ 281,045	$ 12,884	$ 159,676	$ 4,379	132%	51%	49	60
MCINTOSH	$ 32,340	$ 4,650	$ 142,942	$ 14,133	$ 110,602	$ 9,483	342%	204%	121	98
MERIWETHER	$ 98,009	$ 4,811	$ 156,041	$ 6,772	$ 58,032	$ 1,960	59%	41%	58	95
MILLER	$ 34,830	$ 4,965	$ 48,393	$ 7,660	$ 13,563	$ 2,694	39%	54%	117	137
MITCHELL	$ 114,817	$ 5,761	$ 177,882	$ 8,383	$ 63,064	$ 2,622	55%	46%	50	87
MONROE	$ 55,724	$ 5,250	$ 383,436	$ 19,141	$ 327,712	$ 13,892	588%	265%	96	49
MONTGOMERY	$ 14,814	$ 2,267	$ 43,449	$ 5,532	$ 28,635	$ 3,265	193%	144%	146	140
MORGAN	$ 56,504	$ 5,311	$ 191,730	$ 12,420	$ 135,226	$ 7,110	239%	134%	95	80
MURRAY	$ 61,188	$ 4,856	$ 284,497	$ 8,387	$ 223,309	$ 3,531	365%	73%	91	59
MUSCOGEE	$1,601,316	$ 8,576	$2,830,737	$ 15,549	$ 1,229,421	$ 6,973	77%	81%	5	8
NEWTON	$ 172,683	$ 7,159	$ 628,098	$ 10,368	$ 455,415	$ 3,208	264%	45%	36	33
OCONEE	$ 24,296	$ 3,417	$ 258,617	$ 10,545	$ 234,320	$ 7,127	964%	209%	131	66
OGLETHORPE	$ 23,895	$ 2,833	$ 53,538	$ 4,630	$ 29,643	$ 1,797	124%	63%	132	132
PAULDING	$ 60,859	$ 3,807	$ 690,368	$ 8,674	$ 629,509	$ 4,867	1034%	128%	93	31
PEACH	$ 103,662	$ 6,983	$ 239,837	$ 9,595	$ 136,175	$ 2,612	131%	37%	56	68
PICKENS	$ 63,890	$ 6,604	$ 260,822	$ 12,406	$ 196,932	$ 5,802	308%	88%	88	65
PIERCE	$ 51,694	$ 5,275	$ 110,815	$ 7,012	$ 59,121	$ 1,737	114%	33%	100	108
PIKE	$ 14,959	$ 1,972	$ 65,231	$ 4,978	$ 50,272	$ 3,006	336%	152%	145	128
POLK	$ 197,900	$ 6,607	$ 320,535	$ 8,751	$ 122,635	$ 2,145	62%	32%	31	53
PULASKI	$ 78,730	$ 9,055	$ 77,995	$ 9,331	$ (735)	$ 276	-1%	3%	70	124
PUTNAM	$ 44,215	$ 5,220	$ 263,227	$ 14,464	$ 219,012	$ 9,244	495%	177%	108	64
QUITMAN	$ 4,076	$ 1,688	$ 17,368	$ 7,092	$ 13,293	$ 5,404	326%	320%	158	156
RABUN	$ 50,568	$ 6,258	$ 193,365	$ 14,128	$ 142,798	$ 7,869	282%	126%	102	79
RANDOLPH	$ 58,993	$ 5,784	$ 59,495	$ 7,426	$ 503	$ 1,642	1%	28%	94	130
RICHMOND	$1,583,262	$ 10,511	$2,968,650	$ 15,599	$ 1,385,388	$ 5,088	88%	48%	6	7
ROCKDALE	$ 90,904	$ 6,030	$1,343,739	$ 19,484	$ 1,252,835	$ 13,453	1378%	223%	61	21
SCHLEY	$ 11,577	$ 3,618	$ 28,629	$ 7,250	$ 17,052	$ 3,632	147%	100%	152	153
SCREVEN	$ 78,428	$ 5,580	$ 108,325	$ 7,490	$ 29,897	$ 1,910	38%	34%	71	110
SEMINOLE	$ 68,767	$ 9,459	$ 80,216	$ 8,183	$ 11,449	$ (1,276)	17%	-13%	84	121
SPALDING	$ 358,170	$ 9,319	$ 769,374	$ 13,305	$ 411,204	$ 3,986	115%	43%	18	29
STEPHENS	$ 132,885	$ 6,554	$ 271,600	$ 10,722	$ 138,715	$ 4,167	104%	64%	44	62
STEWART	$ 27,068	$ 3,675	$ 31,133	$ 5,793	$ 4,065	$ 2,118	15%	58%	127	151
SUMTER	$ 170,833	$ 6,444	$ 357,550	$ 11,401	$ 186,717	$ 4,957	109%	77%	37	50

Appendix B (Continued). County-Level Data

County	Sales Tax Base 1967 (in 1999 Dol. X 1000)	Sales Tax Base Per Capita 1967 (in 1999 dollars)	Sales Tax Base 1999 (X 1,000)	Sales Tax Base Per Capita 1999	Absolute Growth (X 1,000)	Absolute Growth In Sales Tax Base Per Capita	Percent Change in Sales Tax Base, 1967-1999	Percent Change in Sales Tax Base Per Capita, 1967-1999	1967 Rank	1999 Rank
TALBOT	$ 15,912	$ 2,238	$ 39,426	$ 5,657	$ 23,514	$ 3,419	148%	153%	144	143
TALIAFERRO	$ 6,233	$ 2,074	$ 11,059	$ 5,748	$ 4,826	$ 3,674	77%	177%	156	159
TATTNALL	$ 77,351	$ 4,748	$ 117,088	$ 6,108	$ 39,737	$ 1,359	51%	29%	72	106
TAYLOR	$ 55,554	$ 6,430	$ 65,997	$ 7,964	$ 10,443	$ 1,534	19%	24%	97	127
TELFAIR	$ 79,885	$ 6,816	$ 106,186	$ 9,310	$ 26,301	$ 2,494	33%	37%	69	112
TERRELL	$ 70,961	$ 5,656	$ 84,575	$ 7,548	$ 13,614	$ 1,891	19%	33%	79	120
THOMAS	$ 265,908	$ 7,545	$ 534,997	$ 12,472	$ 269,089	$ 4,927	101%	65%	22	38
TIFT	$ 236,335	$ 9,144	$ 557,104	$ 15,067	$ 320,768	$ 5,923	136%	65%	26	36
TOOMBS	$ 169,173	$ 9,217	$ 320,160	$ 12,319	$ 150,987	$ 3,102	89%	34%	38	54
TOWNS	$ 23,377	$ 4,699	$ 125,490	$ 14,260	$ 102,113	$ 9,561	437%	203%	134	102
TREUTLEN	$ 24,607	$ 3,940	$ 37,674	$ 6,350	$ 13,067	$ 2,410	53%	61%	130	146
TROUP	$ 368,565	$ 7,900	$ 854,399	$ 14,530	$ 485,834	$ 6,631	132%	84%	17	28
TURNER	$ 69,332	$ 7,376	$ 79,397	$ 8,584	$ 10,066	$ 1,209	15%	16%	82	123
TWIGGS	$ 14,246	$ 1,723	$ 77,992	$ 7,648	$ 63,746	$ 5,925	447%	344%	148	125
UNION	$ 37,634	$ 5,392	$ 180,477	$ 10,472	$ 142,843	$ 5,080	380%	94%	115	85
UPSON	$ 183,571	$ 7,630	$ 276,784	$ 10,221	$ 93,213	$ 2,592	51%	34%	32	61
WALKER	$ 248,875	$ 4,872	$ 421,055	$ 6,687	$ 172,180	$ 1,815	69%	37%	24	47
WALTON	$ 151,246	$ 6,887	$ 532,900	$ 9,110	$ 381,654	$ 2,222	252%	32%	40	39
WARE	$ 301,277	$ 8,842	$ 464,605	$ 13,187	$ 163,328	$ 4,345	54%	49%	20	44
WARREN	$ 26,269	$ 3,636	$ 53,855	$ 8,865	$ 27,587	$ 5,229	105%	144%	129	131
WASHINGTON	$ 103,984	$ 5,333	$ 248,774	$ 12,317	$ 144,790	$ 6,984	139%	131%	55	67
WAYNE	$ 143,491	$ 7,608	$ 302,403	$ 11,808	$ 158,911	$ 4,200	111%	55%	41	55
WEBSTER	$ 5,526	$ 1,763	$ 13,476	$ 6,117	$ 7,950	$ 4,354	144%	247%	157	157
WHEELER	$ 13,215	$ 2,546	$ 33,906	$ 6,971	$ 20,691	$ 4,425	157%	174%	149	149
WHITE	$ 42,968	$ 5,321	$ 222,792	$ 12,245	$ 179,824	$ 6,924	419%	130%	110	72
WHITFIELD	$ 537,411	$ 10,772	$1,627,395	$ 19,555	$ 1,089,984	$ 8,783	203%	82%	11	12
WILCOX	$ 23,184	$ 2,924	$ 38,610	$ 5,204	$ 15,427	$ 2,281	67%	78%	135	144
WILKES	$ 74,139	$ 6,602	$ 105,038	$ 9,951	$ 30,898	$ 3,349	42%	51%	77	113
WILKINSON	$ 33,862	$ 3,643	$ 124,532	$ 11,417	$ 90,670	$ 7,774	268%	213%	118	103
WORTH	$ 72,624	$ 4,024	$ 140,379	$ 6,244	$ 67,755	$ 2,220	93%	55%	78	99

About The Author

William J. Smith is a Research Associate with the Fiscal Research Program of the Andrew Young School of Policy Studies at Georgia State University. His research interests include education finance, urban economic geography, and urban and regional fiscal policy.

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